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A SEARCH FOR NEW TYPES OF TROPICAL SPLENOMEGALY *

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Nearly seven years ago, when I was working in the pathology department of the Madras Medical College, Dr. Krishna Menon showed me a series of case histories of patients with chronic enlargement of the spleen, where the enlargement could not be classified on clinical grounds. Complete clinical investigation had failed to reveal the cause of the enlargement. The question was whether these cases belonged to a new type. Was there an unknown type of tropical splenomegaly? In the absence of any definite post-mortem evidence I could not answer the question.

In 1932, De published his analysis of splenic enlargement in Bengal and postulated the existence of a new type, with definite clinical associations and a definite histological picture. In the same year, Hughes and Shrivastava in Lahore brought forward some evidence for the existence of a type of post-malarial haemolytic anaemia in a group of cases. In 1933, Sir Frank Connor's paper at the British Medical Association dealt with a survey of splenic enlargement in Bengal, Bombay, and Rangoon, covering nearly 1,200 cases. He raised the question of surgical intervention in cases of post-malarial and possibly post-kala-azar types where the infections had died down, but left enlarged spleens.

I attempted an analysis of the cases from old autopsy records of the Madras Medical College. These were kindly lent to me by Dr. Goyle to

*Abstract of a paper read before the South Indian Branch of the British Medical Association, 1934.

whom my thanks are due. I have included cases from the more recent autopsy records from the Royapuram Medical School. The records from the Medical College I have analysed date from 1889 to 1929, a period of 40 years. The figures relate to 5,034 autopsies out of which 1,101 showed splenic enlargement as judged by our standards. This gives a percentage of 21. 9 as compared with 50 per cent in De's figures for Bengal and 40 per cent in Gharpure's figures for Bombay.

This analysis and a discussion on that form the subject of a paper in the *Indian Journal of Medical Research* (Bhaskara Menon, 1934). I might be pardoned if I quote extensively from this paper and if I lay more stress on the pathological rather than on the clinical aspects of the question.

In the first group of my classification I have included the types of acute enlargement—the septic spleen of the pathologist. I shall not comment on this group of 399 cases except to point out the high figure for amoebic abscess of the liver and amoebic dysentery—a factor which is of interest to workers in the tropics.

In the second group are the types of chronic venous congestion including one case of portal thrombosis and another of thrombosis of the splenic vein.

In the third group are included all cases of cirrhosis of the liver showing splenic enlargement. In portal cirrhosis the splenic enlargement is slight in a large proportion of cases, but others show marked enlargement. These are cases that merge almost imperceptibly into Banti's disease. There are two instances of this condition. That splenic enlargement in cirrhosis is not a matter of mere chronic venous congestion is now certain. The large spleens met with in some cases have been the subject of much discussion. The old idea of a splenomegalic cirrhosis presupposes toxins formed in the spleen travelling to the liver and causing damage. McNee regards this type as due to toxins which are dammed back into the spleen, owing to obstruction to the portal circulation. It seems to me that toxins might have varied reactions on the parenchyma and reticulo-endothelium. Those that affect the parenchymatous cells may cause cirrhosis, and those which act more on the reticulum may induce splenic enlargement. The cirrhosis is slight and occurs only late in the disease.

Malarial cirrhosis is a controversial theme. On the one side Osler from Johns Hopkins, Rogers from Calcutta, Tirumurthi and Radhakrishna

Rao from Vizagapatam all deny its existence. Rolleston and McNee doubt whether it is a coincidence. I would not dare to venture out against this formidable array, but Sinton and Hughes have demonstrated the effect of malaria in causing damage to the liver, and Hughes from Lahore cites cases where the gradual change could be followed from malaria with splenic enlargement to cirrhosis with ascites. I shall only remark there is nothing incongruous in the idea of a malarial cirrhosis. Maximow has taught us that the reticulum cell is capable of being transformed into hyperplastic endothelium and even into collagen fibre if the stimulus is chronic. With kala-azar cirrhosis we are also on uncertain ground. Rogers has described an intercellular cirrhosis and in addition a portal type. Shanks and De have found fibrotic changes in the liver by special staining in 30 per cent of their cases, though they conclude that this is not a regular event in kala-azar.

The next group of splenic enlargement, in disease of the haemopoietic system including mostly leukaemias, is of no special significance. In the five cases of ancylostomiasis I have recorded, the enlargement may be due to toxic absorption from the intestine.

Chronic hyperplasia from the infective granulomata form a well recognised group. Malaria and kala-azar are of special importance here. Malarial enlargement is responsible for 11.3 per cent of the total and kala-azar has even a higher figure of 14.3 per cent. It is noteworthy that De reports only 6.5 per cent of malarial spleens in his series. Tirumurthi and Radhakrishna Rao from Vizagapatam point out the low incidence of malarial spleen in the autopsy records as compared with clinical findings. Hughes and Shrivastava report a high incidence in Lahore.

When gametocytes are absent in the blood, the clinical diagnosis of chronic malaria rests mostly on the history. Some would lay a good deal of stress on the finding of pigment-containing mononuclear cells. Our experience has been the reverse. Such pigmented monocytes are infrequently met with even in cases with parasistes in the blood. Spleen puncture is no doubt a risky procedure, but I believe it is much more certain in its results. To the pathologist, the appearance of the spleen is sufficiently indicative. Histological sections of the spleen and liver are of great confirmatory value, since haemozoin can be demonstrated. In doubtful cases, the ammonium sulphide reaction may be tried, as haemozoin is dissolved by ammonium sulphide.

Uncommon types form the next group in this analysis. Chronic hyperplastic peritonitis of obscure origin (the endemic ascites of Megaw, the superior peritonitis of Sprawson) is a type that is of interest. Enlargement with primary carcinoma of the liver is a feature to which I believe little attention has been drawn so far. Enlargement due to follicle hyperplasia is a curious condition first described in 1926 in America. These are instances of reticulo-endotheliosis, the so-called "reticulosis" of modern writers. I have been frequently asked by clinicians if there is any evidence of the Gaucher type here. So far I have met with none. There is one case, however, in my series of localised lipoid deposits in diabetes.

I have grouped together 45 cases, where the cause of the enlargement is obscure. The existence of this group, I believe, is mostly due to imperfect investigation rather than to the presence of any well-defined unknown types. I have attempted to sub-divide this group on a morphological basis. Of these, the first 14 were probably unrecognised kala-azar. These cases were recorded before the discovery of the parasite. Another 5 form a series in which the appearance suggests kala-azar, but no parasites were found. To my mind, these are cases where the parasites have undergone post-mortem disintegration till they are no longer recognisable. One other case seems to be an unrecognised leukaemia. Three others showed a late cirrhosis of the liver. One other was probably of the same kind before the occurrence of the cirrhosis. Two more cases suggest the co-existence of malaria and some acute infection. Another was due to perisplenic suppuration. In the remaining 18 cases which could not be classified, I could find no common factor since the cases have been imperfectly investigated. Presumably, the enlargement is due to a combination of factors. I have cited an instance in my first paper of a case where there was a large spleen with no history of malaria, yet malaria pigment was found in the spleen puncture. A strongly positive Wassermann and Kahn reaction suggested the co-existence of syphilis.

When we consider the possibilites of new types in South India, we have to take into account two types, one described by De in Bengal and the other by Hughes and Shrivastava in Lahore. If we take up De's type of Bengal splenomegaly, according to De, these cases come from West Bengal and the lower parts of Eastern Bengal. They all give a history of irregular fever which is often diagnosed as malaria, kala-azar, or enteric fever, but which is not amenable to quinine or antimony. There is a gradual and

progressive splenic enlargement which is followed by secondary anaemia. The liver is enlarged in the early stages, but cirrhosis gradually supervenes, followed by ascites. Histologically, coarse fibrosis of the trabeculae, reticular fibrosis and red cell phagocytosis are the prominent features.

A study of this picture reminds me of another which was painted and repainted by Banti and commented on and critised by a whole continent. I refer to the syndrome of Banti, so-called Banti's disease, where the condition starts at first as a splenic anaemia with occasional irregular fever and ends up in cirrhosis of the liver. That the histological picture is not constant is borne out by Banti's subsequent descriptions and by a whole host of critics, Durr, Nagaeli, and Krumbhaar, to cite a few. The reticular fibrosis that De emphasises seems to me nothing more than the *fibro-adenie* of Banti. Red cell phagocytosis and deposit of blood pigment, though denied by Banti, has been noted by a number of observers. When we remember that the spleen is the charnel house of the erythrocyte, red cell phagocytosis in the spleen is neither distinctive nor significant.

There are those who might say that Banti's disease has no meaning and it is only a syndrome. Well, then, call it what we like, an uncommon type of portal cirrhosis, as McNee would have it. Yet we cannot deny that there is such a clinical picture.

If we pass on to the type described by Hughes and Shrivastava, are we dealing with a new type? They believe that repeated attacks of malaria with chronic enlargement of the spleen is followed by a hyperactivity of the reticulo-endothelium so that the phagocytic endothelial cells would pick up normal erythrocytes and induce a haemolytic anaemia. They cite cases where the bilirubin content of the serum is high. Fragility changes in the red cells are exceptional in their series. The malarial infection is believed to have died down since the parasites were absent in the blood and there was no fever. It is possible, however, that in such cases the malarial infection might have been latent and still smouldering in the spleen.

Ross's studies on malaria have taught us that 25,000 parasites per c. mm. are necessary to affect the temperature curve and induce clinical malaria. In latent malaria, parasites would be found in such scanty numbers that demonstration in a drop of blood on a slide would be dificult, if not impossible. In such cases, are we justified in concluding that the malarial infection has died down and that the haemolytic anaemia is due

to the hyperactivity of the reticulo-endothelium on the normal erythrocyte? It is only by a coordinated investigation between the clinician, the biochemist and the pathologist that this question can be settled.

To revert to the original theme, are there new types of tropical splenomagaly in South India? Are there cases masquerading as chronic malaria, kala-azar and splenic anaemia? The history of kala-azar itself suggests the possibility of such new types. But from the analysis that I have attempted, based mostly on dead pages, I am not convinced that any well-defined unknown type exists here in South India.

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NOTE ON A CASE OF POPLITEAL ANEURYSM TREATED BY HUNTER'S METHOD.

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Popliteal Aneurysm is by far the commonest type of aneurysm occurring in the extremities, and also the most amenable to surgical treatment.

CASE.—Mr. S.......Hindu, aged 28, was seen by me about the middle of February 1935, his only complaint being that he had a little pain in his right knee of about three months' duration. There was no history of having had any sore on his penis, but he admitted having exposed himself to the liability of venereal infection.

On examination, the patient was a well-built man. The right lower extremity as a whole was better developed than the left one, and this, he said, was the case from his boyhood, and he had always felt the left one weaker than the right. On the back of the right knee-joint, a characteristic *expansile swelling* of the size of a large hen's egg could be palpated. There was a definite *thrill* palpable over the swelling which occupied practically the whole of the popliteal fossa. The pulsation was arrested by pressure on the femoral artery above, and a definite *systolic bruit* was heard over the tumour. There was no congestion or oedema of the foot and leg. There was no limitation of movement of the knee-joint, and, apart from the slight pain in the joint, the patient was not troubled about the swelling even in the least. The heart and the other systems were normal. The blood pressure was not raised and the Wassermann reaction was strongly positive.

The patient was put on potassium iodide, 15 gr. per day, at first, and this was increased to 60 gr. per day in a week's time. The pain was immediately relieved.

Surgical Treatment.—Hunter's method of treatment consists in ligaturing the artery at some distance from the aneurysmal sac, a branch intervening between the aneurysm and the site of ligature. The object

of ligaturing the artery at a distance is not to cut off the entire blood flow into the aneurysmal sac, but to slow down the blood-stream to such an extent that clotting is promoted inside the sac. For cases of aneurysms which do not allow of ligature of the main artery, just proximal to the sac, Hunter's method is best suited. The great objection to Hunter's method of proximal ligature at a distance from the sac is that two sets of collateral circulation have to be developed, one around the sac and the other around the site of ligature. If the collateral circulation is not adequate, gangrene is very likely to ensue. In about 25 per cent of cases of aneurysms of the popliteal artery treated by Hunter's method, gangrene has occurred.

In the above case Hunter's method was decided on, as the patient was quite a young man with good physique and the likelihood of efficient collateral circulation establishing itself was very good. In doubtful cases, intermittent compression of the artery above helps to establish a collateral circulation.

Under spinal anaesthesia, using novocaine, the femoral artery was ligatured in Hunter's canal, and the limb, after the patient was returned to bed, was covered with cotton wool and put in a box-splint.

The patient suffered from severe pain, and the limb, which was pale and cold at first, soon became warm, and, in about twenty-four hours, the toes regained their normal colour and warmth. The pain was controlled by morphine and the sutures were out on the seventh day. It took nearly a fortnight after the operation for the patient to walk about. There was no pulsation immediately after the operation, and the pulsation never returned any time afterwards. There was a firm hard swelling in place of the aneurysmal sac—evidently the sac had become completely filled with blood-clot and this slowly decreased in size. Three months after the operation, the hard swelling disappeared completely.

The patient was put on a complete course of antisyphilitic treatment.

Other Methods of Treatment.—Proximal ligature of the artery close to the sac is possible only when the aneurysm is situated low down in the popliteal fossa.

Complete excision of the sac is not possible in late cases as there are considerable adhesions between the sac and the surrounding structures,

but this method of treatment should be attempted wherever it is possible. After the sac is excised, it may be possible to bring the two ends of the artery together; otherwise, a piece of a vein is grafted between the two ends of the artery and the continuity is established.

Matas's operations of *Endo-Aneurysmorrhaphies* have not come into general use, although in his own hands and in those of a few American surgeons, they have given good results. Most of Matas's operations have been performed on popliteal aneurysms. The cases we see here come very late, and the sac has grown into such a big size and has caused all the neighbouring nerves to be firmly adherent to it, that reconstructive and restorative methods of aneurysmorrhaphy are out of question. The obliterative method may be tried in selected cases, but the risks of gangrene setting in are great.

Hunter's operation is contraindicated where serious cardiac disease exists, where pressure over the vessel does not control the circulation through the sac, where the peripheral vessels are extensively calcified, or where gangrene of the limb is threatening or is present.

DEVELOPMENT OF THE HEART, NORMAL AND ABNORMAL.

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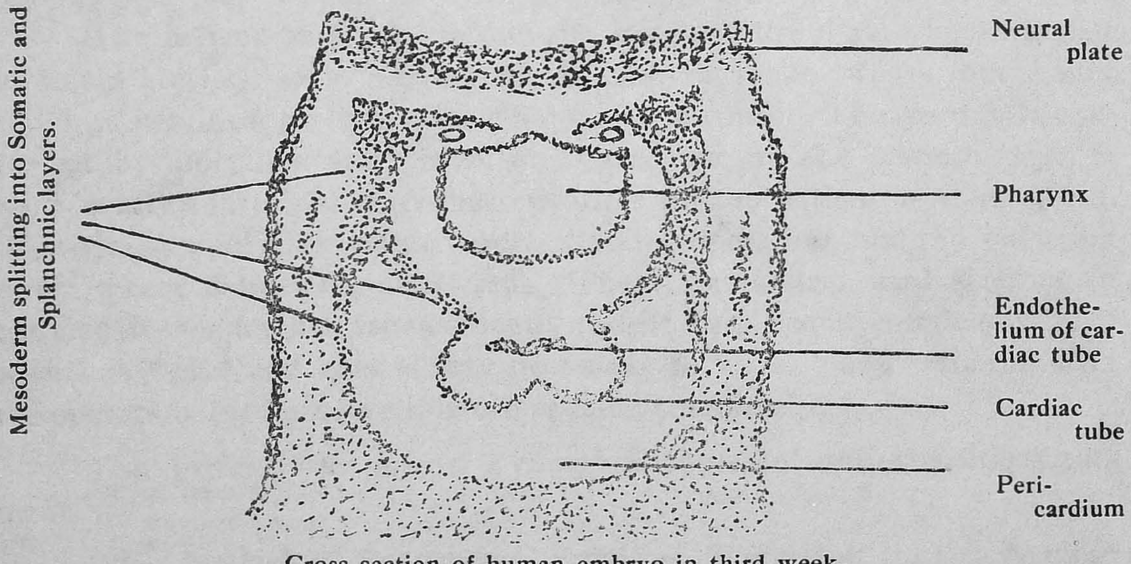
It will be advantageous to bear in mind from the outset a general truth that malformations of the body including those of the heart are almost invariably due to an arrest of natural processes brought about by obscure forces.

The heart is of mesodermal origin, being a modified blood vessel formed by the fusion of two bilateral primitive arteries called dorsal aortae. It appears in the third week of intra-uterine life, in the cervical region, and is then below the mandible and ventral to the pharynx. An embryonic partition called *septum transversum* bounds it caudally. A cross-section of it at this stage has the appearance shown in Diagram 1.

DIAGRAM 1



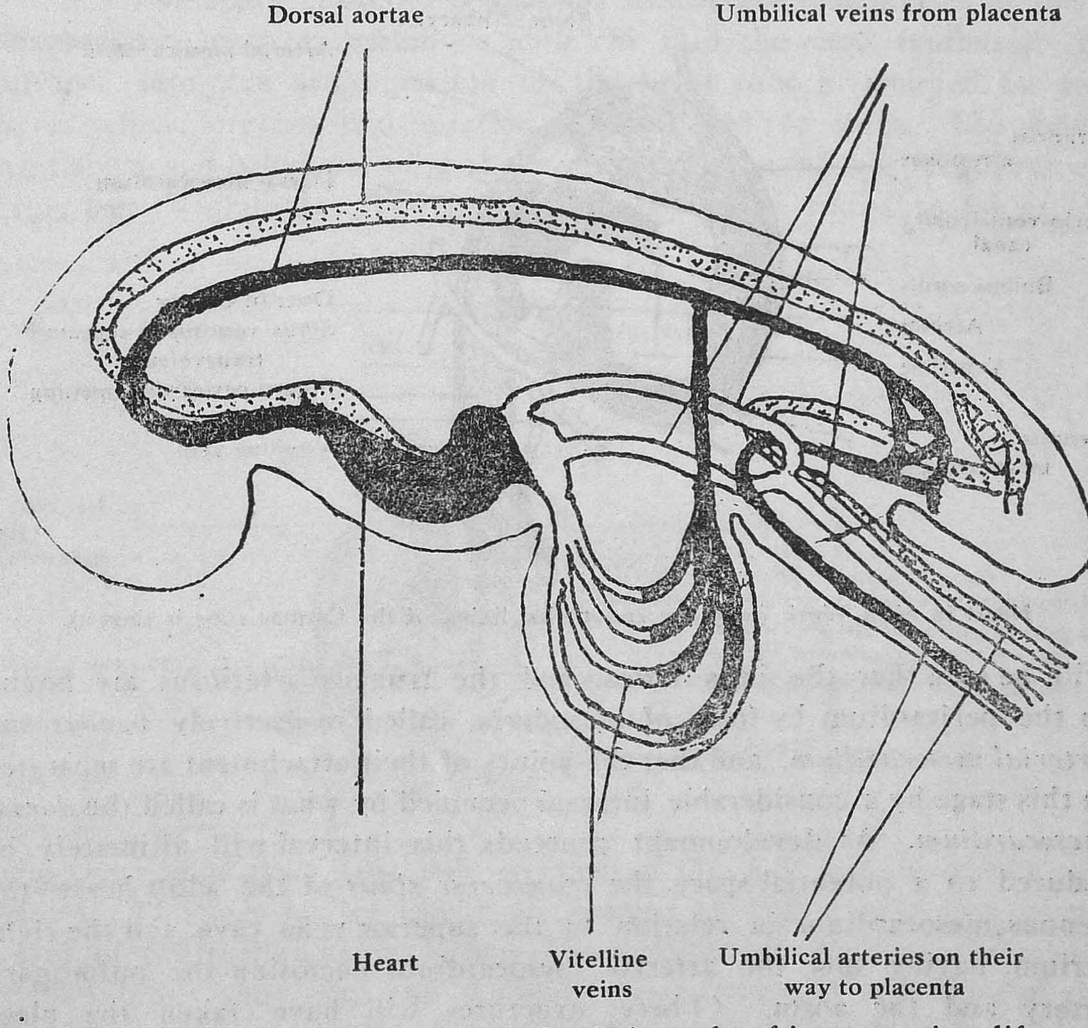
Cross section of human embryo in third week.

It will be seen that the organ is composed of two parts, an inner one representing the endothelial lining of the adult heart, and an outer, the rest of the organ, viz., the musculature and the visceral layer of pericardium. The inner comes from the vasoformative mesenchymal cells

which are present throughout the embryonic body and the outer from the splanchnic layer of mesoderm. The bilateral origin of the heart, its position within the pericardium, and its connection with the pharynx are also seen. By its cranial end it becomes continuous with the dorsal aortæ which connect it with the placenta through the umbilical arteries and by the opposite extremity it receives the umbilical and vitelline veins (see Diagram 2).

DIAGRAM 2

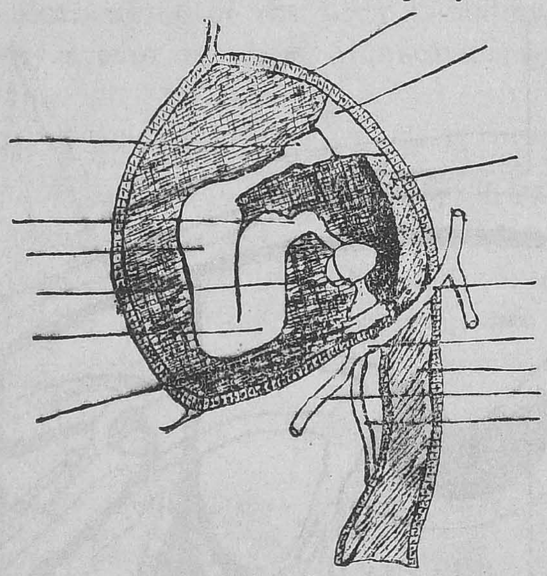
To illustrate early embryonic circulation



The heart begins to beat late in the 3rd week of intra-uterine life. At this stage it is pre-eminently a pump for the placenta, sending blood to it by way of the umbilical arteries and receiving it back through the umbilical veins. Up to the time of birth this continues to be the most essential function of the organ.

The next stage in the organisation of the heart is highly characteristic. The organ now consists of a twisted loop divisible into a number of parts each of which has some share in the structure of the adult organ. The parts as enumerated from the caudal to the cranial extremity are: 1. sinus venosus; 2. atrium or auricle; 3. atrial or atrio-ventricular canal; 4. ventricle; 5. bulbus cordis; 6. truncus arteriosus (see Diagram 3). It

DIAGRAM 3



Heart in Fifth Week (only the endothelial lining of the Cardiac tube is shown).

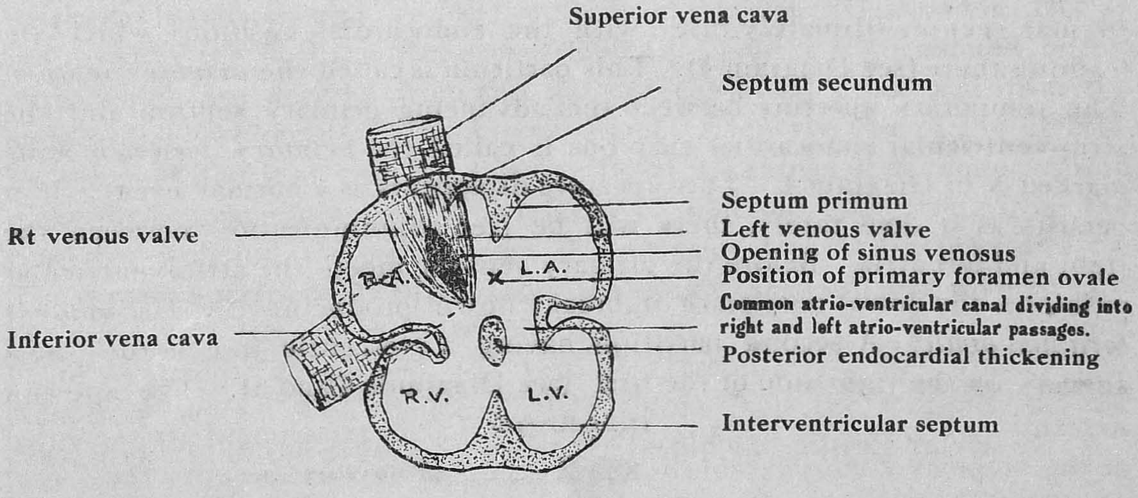
will be seen that the sinus venosus and the truncus arteriosus are bound to the pericardium by folds of mesoderm, called respectively *venous* and *arterial mesocardium*, and that the points of their attachment are separated at this stage by a considerable interval occupied by what is called the *dorsal mesocardium*. As development proceeds, this interval will ultimately be reduced to a potential space, the *transverse sinus* of the adult heart—the venous mesocardium in relation to the superior vena cava and the right atrium having met the arterial mesocardium enclosing the pulmonary artery and the aorta. (These structures will have taken the place of the sinus venosus and the truncus arteriosus by that time). Three pairs of venous channels now empty into the sinus venosus: two vitelline veins, two umbilical veins, two ducts of Cuvier. The last pair, i.e., the ducts of Cuvier, carries venous blood from the region of the trunk. These vessels have to traverse the septum transversum before they enter

the sinus venosus, and it may be noted that this part of the embryonic partition will become a portion of the pericardium, viz., the one which is attached to the central tendinous division of the diaphragm. From the truncus arteriosus at the cranial end of the embryonic heart the aortic arches come out to connect it with the dorsal aortae.

We shall now proceed to trace the growth changes of each of the six subdivisions of the primitive cardiac tube.

1. *The sinus venosus.*—It remains as a separate structure in lower vertebrates but in mammals is absorbed into the atria (auricles). Its entrance into the atrial portion of the heart tube is guarded bv two valves which prevent regurgitation of blood into the sinus. The valves meet above and below, forming the *superior* and the *inferior fornix* respectively (see Diagram 4). The inferior fornix can be traced as far as the

DIAGRAM 4



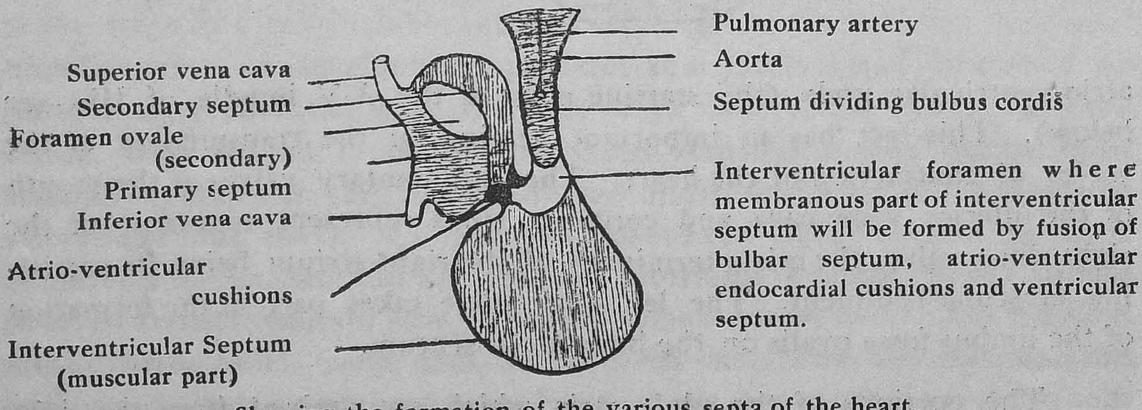
atrio-ventricular node (the starting point of the A-V bundle of His—see below). This fact has an important bearing on the transmission of the waves of contraction of the heart. The rudimentary valves at the mouth of the inferior vena cava and coronary sinus represent remnants of the right sinus valve, the crista terminalis of the right atrium being its persisting muscular rudiment. The left sinus valve takes part in the formation of the limbus fossa ovalis on the inter-atrial septum.

The portions of the adult atria which are derived from the sinus venosus are the smooth posterior areas where the great veins open, the

anterior regions, including the auricular appendages where the musculi pectinati occur, being developed from the atrial portion of the cardiac tube. In each atrium the junction between the morphologically different elements entering into its composition is indicated by a ridge, the *crista terminalis*. The musculature of the sinus is a very specialised tissue containing a large number of nerve cells. In the course of development towards the adult stage of the human heart, the muscle disappears entirely except at the mouth of the superior vena cava and the atrial wall in front of it. This remnant of sinus musculature constitutes the *sino-auricular node*, the "pace-maker" of the heart.

2. *The atrium (auricle)*.—To start with, it consists of one undivided chamber, continuous caudally with the sinus venosus, and cranially with the ventricular division of the embryonic cardiac tube through the atrial canal (see Diagram 3). It grows dorsally, while, as we shall see presently, the ventricle expands in the opposite direction, i.e., ventrally. A partition grows down from the dorsal wall, and, advancing towards the atrio-ventricular region, ultimately fuses with the endocardial cushions which are forming there (see Diagram 4). This partition is called the *primary septum*. The temporary aperture between the advancing primary septum and the atrio-ventricular endocardial cushions is called the *primary foramen ovale* marked X in Diagram 4. This aperture disappears as a normal event. If it persists, as it does rarely, there will be free communication between the right and left atria. Before the primary septum meets the atrio-ventricular cushions, the dorsal portion of it breaks down producing the (*secondary*) *foramen ovale*. A second partition, having a crescentic free border, now appears on the right side of the first (see Diagrams 4 and 5). The anterior

DIAGRAM 5



Showing the formation of the various septa of the heart.
Right face of the septa drawn.

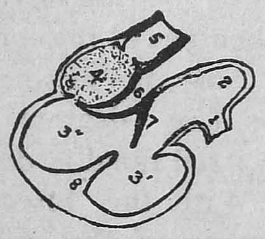
and posterior free ends of the crescent fuse with the atrio-ventricular cushions, but the intermediate part is simply applied to the right face of the primary septum without fusing with it, so that blood can pass from the right to the left side of the atrium through the (secondary) foramen ovale. This state of things continues normally till birth, when in the majority of individuals the secondary septum blends with the first obliterating the (secondary) foramen ovale permanently. The primary septum forms that part of the interatrial wall of the adult which lies at the bottom of the fossa ovalis, and the secondary septum gives rise to the limbus fossa ovalis.

3. *The atrial (atrio-ventricular) canal.*—On account of the out-flanking growth movement of the atrial part of the primitive cardiac tube from the dorsal side and that of the ventricular part from the ventral side, the atrial canal, which was hitherto lying exposed on the surface of the tube, gets completely buried (see Diagram 4). For the same reason, as adult stage is reached, its distal end reaches well into the ventricles. This fact is indicated by the position of the ventricular ends of the tricuspid and mitral cusps which are derived from the walls of the atrial canal and from the endocardial cushions developing in the canal. As in the case of the atrium, its lumen at first is an undivided space. Two thickenings of the endocardium make their appearance about the middle of the canal, one arising from the posterior wall and the other from the anterior (see Diagrams 4 and 5). These meet and fuse. In this manner the single atrial canal is divided into the right and left atrio-ventricular passages. With the fused cushions blend, as already mentioned, the ventral extremities of the primary and secondary septa. The endocardial cushions and the margins of the canal give rise to the atrio-ventricular (tricuspid and mitral) valves.

4. *The ventricle.*—This part of the cardiac tube has no lumen to begin with, its interior being filled with a spongy tissue, as in the frog. During its growth it expands ventrally for the reason that room has to be found on the dorsal side for the atrium. At the same time the spongy tissue is absorbed from everywhere except (a) the site of the interventricular septum (see Diagram 4) and (b) a few other situations to be mentioned hereafter. Thus, a lumen comes into existence, divides into two parts, the right and left ventricular cavities. What in effect takes place during the growth of the ventricle is this: the portion destined to be the interventricular septum remains comparatively stationary, while the sides

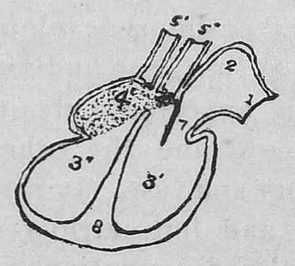
grow. This fact is indicated throughout adult life by the interventricular sulcus. The septum, in the first instance, is an incomplete one and, consequently, the two compartments of the ventricle communicate with each other above the free upper border of it. This communication is called the *interventricular foramen*, and is ordinarily a temporary opening only (see Diagram 5). It is closed by the fusion of the ventricular septum with the bulbar septum (see below) and the atrio-ventricular endocardial cushions. The structure which thus fills the gap forms the membranous portion of the interventricular septum in contradistinction to the muscular part, the remaining and major subdivision of it. The interventricular foramen may not be closed owing to the non-fusion of the various embryonic rudiments mentioned just now. Such a defect constitutes one of the most common malformations of the heart and occurs usually with congenital stenosis of the pulmonary artery. The remaining unabsorbed portion of the spongy interior of the ventricular rudiment is transformed into the chordae tendinae, musculi papillares, trabeculae carnae, and, in the case of the right ventricle, the moderator band in addition.

DIAGRAM 6



(a)

Heart in Third Week



(b)

Heart in Third Month

1. Sinus venosus.
2. Atrium.

3' Left ventricle. 3" right ventricle.

4. Bulbus cordis. 4' Part of right ventricle derived from bulbus cordis. 4" Part of left ventricle derived from bulbus cordis.
5. Truncus arteriosus.

5' Pulmonary artery. 5" Aorta.

6 is placed between the contiguous walls of bulbus cordis and ventricle. Note that these walls have been absorbed in stage reached in (b).

7. Anterior cusp of mitral valve which intervenes between the mitral orifice and the aortic opening.
8. Interventricular septum.

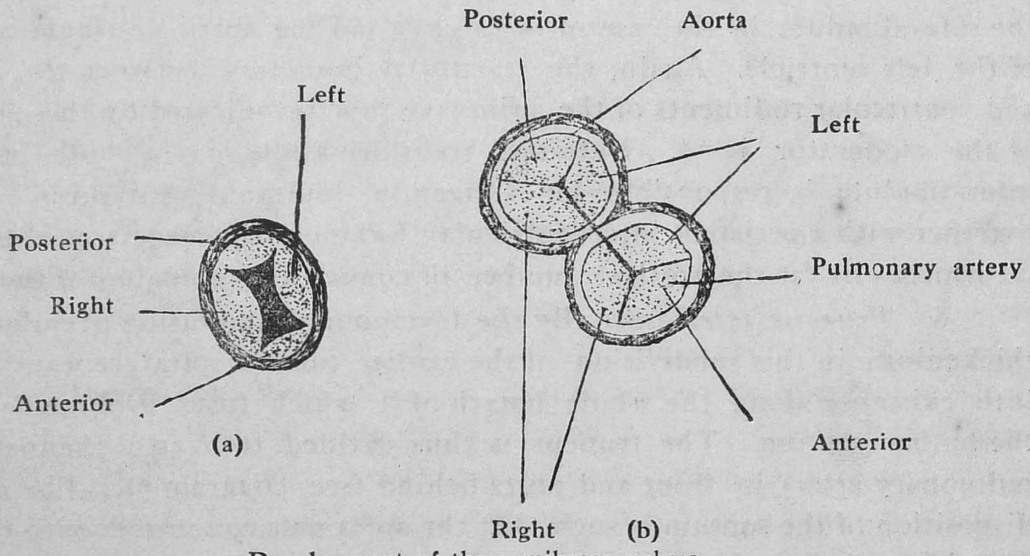
5. *Bulbus cordis.*—This is a separate unit in the embryonic cardiac tube distinctly marked off from the ventricle proximally and the truncus arteriosus distally (see Diagram 3). But in the course of its further development, it is absorbed into the ventricles, chiefly the right. We have seen that a similar fate overtakes the sinus venosus, which, losing its distinctness as such, is merged into the atria. A series of changes, too complicated to be described here in detail, take place in the bulb whereby (a) the contiguous walls of the bulb and the ventricle are absorbed resulting in the union of the two cavities (see Diagram 6), and (b) a septum called *bulbar septum* is developed inside this subdivision of the primitive heart, which joins up, proximally, with the interventricular septum and the posterior of the two endocardial cushions in the region of the atrio-ventricular canal (see Diagram 5) and, distally, with the spiral septum (see below) coming into existence inside the truncus arteriosus. This septum in the course of the bulb is instrumental in dividing it into two parts, a bigger one added to the right ventricle and a smaller to the left. The respective areas of the adult ventricles derived from the bulbus cordis are the infundibulum, in the case of the right, and the aortic vestibule, in that of the left ventricle. Again, the territorial boundary between the bulbar and ventricular rudiments of the primitive tube is indicated by the position of the moderator band. Defective transformation of the bulb into the infundibulum is responsible for congenital pulmonary stenosis, which, together with a peristent interventricular foramen—an associated condition —furnishes by far the greatest number of congenital anomalies of the heart.

6. *Truncus arteriosus.*—By the development and fusion of endocardial thickenings in this subdivision of the cardiac tube, a spiral septum comes into existence along the whole length of it which fuses proximally with the bulbar septum. The truncus is thus divided into two channels, the pulmonary artery in front and aorta behind (see Diagram 6). The normal disposition of the septum is such that the aorta gets connected with the left ventricle and the pulmonary artery with the right. If the spiral is directed in the opposite way the aorta will be in comunication with the right ventricle and the pulmonary artery with the left. Rarely, the proximal end of the septum is placed at right angles to the ventricular septum, i. e., midway between the first two positions. In that case, each ventricle on contraction will be pumping blood into both the arteries. The morphological junction of the bulbus cordis and truncus arteriosus in the adult heart is the region of the aortic and pulmonary valves.

With the formation of the spiral septum in the course of the truncus arteriosus and its joining up with the bulbar septum, the heart is divided completely into right and left parts, the right part subserving the pulmonary circulation and the left one the systemic. When once the partition is effectively formed the communication between the two halves is only an indirect one, viz., through the capillaries of the lungs. It will be useful to recapitulate the various elements of this remarkable partition or septum. They are (a) the interatrial septum composed chiefly of the primary and secondary septa fusing with (b) the atrio-ventricular endocardical cushions which in their turn blend with (c) the interventricular septum and (d) the bulbar septum. Lastly (e) the spiral septum of the truncus arteriosus comes in and, joining up with the bulbar septum, completes the partition.

The Formation of the Semilunar Valves, aortic and pulmonary.—Four thickenings, anterior, posterior, right and left, arise in the course of the endocardium lining the cardiac tube at the junction of the bulbus cordis and the truncus arteriosus, as shown in Diagram 7 (a). The spiral septum

DIAGRAM 7.



Development of the semilunar valves

mentioned in connection with the truncus cuts across the right and left thickenings and divides each of them into an anterior and a posterior part [see Diagram 7 (b)]. The anterior divisions of the right and left thickenings together with the undivided anterior thickening get converted into the semilunar valves of the pulmonary arteres. Similarly, the two posterior divisions together with the unsplit posterior thickening get fashioned into the valves of the aortic opening.

The Atrio-Ventricular Bundle (of His)—In lower vertebrates, the atrial or atrio-ventricular canal is surrounded by a collar of muscle tissue which is continuous proximally with the musculature of the atrium, and distally with that of the ventricle. This tissue is responsible for the transmission of the waves of contraction from the atria to the ventricles. In the mammalian heart, including the human, this muscular collar entirely disappears and is replaced by a fibrous ring, except in one place where a small fasciculus of the original muscle remains. This remnant now forms the only muscular connection between the atrial and ventricular portions of the heart. In the adult stage, this strand (A - V bundle of His) takes origin in a special group of cells called the *atrio-ventricular* node situated in the septal wall of the right atrium near the opening of the coronary sinus. Therefrom the bundle proceeds distally along the upper border of the interventricular septum and divides into right and left branches for the corresponding ventricles. Reference has already been made to the fact that the right sinus valve arising in the region of the sino-auricular node (pace-maker of the heart) ends in the posterior of the two endocardial cushions of the atrio-ventricular canal. This actually is in the close vicinity of the node, the starting point of the A-V bundle.

Reference may now be made to an embryonic structure which, though not strictly a part of the primitive cardiac tube, comes into importance in association with developmental defects of the organ. That structure is the *ductus arteriosus.* The vessel in the embryo short-circuits most of the blood in the pulmonary artery to the aorta, there being no necessity at that stage for all the pulmonary blood to circulate through the lungs. That being no longer the case after birth, i. e., as it is imperative for all the blood in the pulmonary artery to circulate through the lungs, there is no further need for this embryonic channel. It should disappear. Normally, it is reduced to a fibrous remnant connecting the aortic arch with the left branch of the pulmonary artery. In company with other abnormalities this channel may remain open.

Having thus reviewed the embryology of the heart we shall now consider some of the common abnormalities.

Persistent primary foramen ovale.—This is due to failure of union between the primary septum and the atrio-ventricular endocardial cushions. The defect may be so gross as to involve the whole of the partition between the atria, with the result that there will be only one chamber in the atrial division of the heart.

Patent (secondary) foramen ovale.—It may occur alone or in company with other defects and is due to the non-fusion of the primary and secondary septa. In a considerable proportion of adult bodies this defect is noticed--not usually during life, but accidentally at post-mortem examinations. In other cases it is a compensatory arrangement in connection with defects like congenital pulmonary stenosis.

Atrio-ventricular passage.—Instead of two canals, there may be only one undivided passage due to failure of fusion between the two endocardial thickenings of that region of the primitive cardiac tube.

Congenital pulmonary stenosis.—This is one of the most, if not the most, common of the congenital defects of the heart and is the result of faulty development of the bulbus cordis. There is invariably associated with it a cavity of considerable size in the region of the infundibulum of the right ventricle. As a rule, the interventricular foramen is patent and blood, therefore, can pass from the right ventricle to the left. The ductus arteriosus is also open in such cases and part of the aortic blood goes that way to the lungs for their nutrition. The state of the ventricles will differ materially according to whether the stenosis takes pace before the interventricular foramen is closed or after.

If before the right ventricle gets hypertrophied and the left atrophied, the septum is shifted to the left and the aorta is wholly or partially connected with the right ventricle, the foramen ovale and the ductus arteriosus are open. The lungs get blood from the aorta through the ductus arteriosus and not to any extent from the pulmonary artery. The whole of the systemic and almost the entire pulmonary circulation are carried on by the right ventricle.

If, on the other hand, the stenosis occurs after the interventricular foramen is closed, the left ventricle enlarges and hypertrophies; and the foramen ovale and the ductus arteriosus remain patent.

Atresia or complete obliteration of the pulmonary artery may occur, but is a much rarer condition than the preceding. If it occurs after the interventricular foramen is closed, the right ventricle atrophies and ultimately the right atrio-ventricular opening gets obliterated.

The interventricular septum may be absent wholly or in part. Partial deficiency occurs in the upper portion where the membranous rudiment has not developed, and an opening, the interventricular foramen, is left in its place. But sufficient has been said about it already.

Complete absence of the septum is rarer. When that happens, the ventricle is composed of a single chamber as is the case in the frog.

Stenosis and atresia of the aorta are rarer forms of congenital defects than those of the pulmonary artery. Anyone of three points in the course of the artery may be affected: at its origin from the left ventricle, just proximal to its junction with the ductus arteriosus, or just distal to the last. In the *first* variety the left ventricle remains undeveloped and the systemic circulation is mostly carried on by the pulmonary artery through the ductus arteriosus. The *second* type occurs along with other malformations such as pulmonary stenosis, and most of the systemic circulation is done by the right ventricle through the ductus arteriosus which remains open. The *third* kind is more common. The aorta is stenosed below the junction with the ductus arteriosus. A collateral circulation develops in these cases and compensates the defect in some measure.

An *abnormal communication* may be present *between the aorta and the pulmonary artery*, the result of defective development of the spiral septum in the truncus arteriosus.

The abnormal positions of the aorta and the pulmonary artery in relation to the ventricles, in certain cases, have been mentioned already. No satisfactory explanation of such phenomena is forthcoming. *Congenital defects of the atrio-ventricular valves* may be present, the number of cusps being either increased or decreased. The tricuspid valve is more commonly affected than the mitral.

Transposition of the heart to the right side, constituting the condition called 'dextro-cardia,' may occur. It is almost invariably a part of a general reversal in position of the organs and is detected either on X-ray examination or at autopsies.

Lastly, a word might be said about a rare condition called 'ectopia cordis.' Here, the organ lies outside the thoracic cavity. It may be placed in the neck, in front in the chest, or in the abdomen. When it is in the pectoral region, the sternum is found to be cleft in the middle line or partially absent, the rudimentary organ protruding through the deficiency. In extreme cases, only the dorsal wall of the pericardium is present, which is flush with the general surface of the body. Such cases remind one of 'ectopia vesicae' where the whole of the urinary bladder except the trigone is missing and the trigone itself with the orifices of the ureters presents at the surface.

GLEANINGS FROM MEDICAL LITERATURE

21 EPILEPSY AND ITS TREATMENT

JAMES COLLIER

The Practitioner, July 1934, p. 37.

Epilepsy is common in birds and mammals. Heredity is a factor in the transmission of the disease but it is not so great as is usually supposed. The malady may begin at any period of life, but occurs with greater frequecny in early childhood, with the onset of puberty, and in old age. It is generally classified as *organic or symptomatic* epilepsy and *idiopathic* epilepsy. Epilepsy-like phenomena which follow local diseases of the brain, kidney, thyroid and liver, those occurring in infantile malnutrition, infection and intoxication are called symptomatic or organic epilepsy.

Recent investigations point to the conclusion that all epilepsies are the result of one and the same underlying fault in metabolism, and that local lesions of the brain, uraemia, and intoxications act as secondary factors in raising the epilepsy-producing potentiality of this metabolic fault. It seems that the community might be divided into three classes: (1) Those in whom no trace of metabolic fault is present—they cannot be provoked into epilepsy by local lesions of the brain or other organs or intoxications; (2) Those in whom the metabolic fault is present in minor degree—in them a second factor such as disease of the brain will cause epilepsy; (3) Those with the fault in high degree—they are the idiopathic epileptics. The clinical facts that make the above hypothesis acceptable are: (1) the periodicity of the attack and their association with sleep and moments of bodily and mental inactivity when oxidative processes are deemed to be low; (2) occurrence of fits in certain cases for a few days followed by freedom from attacks for months and years, the explanation being that the fault is present in sufficient degree only at the period when the fits occurred; (3) epileptic women are nearly always free from epilepsy during pregnancy, it being supposed that the foetus corrects the metabolic fault of the mother.

This evidence of a metabolic dyscrasia is not very clear or convincing. In epilepsy, when the attacks are frequent, the alkali reserve is increased and there is great variation in the value of the blood *p*H from day-to-day. O. Foester states that in epileptics hyperventilation of the lungs by so simple a method as making the patient breathe deeply as fast and as long as he can will bring about an attack at once by the excessive removal of carbon dioxide. It has been noted that a condition of *status epilepticus* develops in patients not previously epileptic by the use of alkalies in the treatment of gastric ulcer. Epilepsy is incompatible with acidosis, and this may account for the rarity of epilepsy in diabetics. The good effect of a ketogenic diet seems to suggest that alkalosis plays some part in the production of epilepsy.

A sudden drop in blood pressure precedes or accompanies an attack of epilepsy. This is seen clinically as a momentary facial pallor. It was observed by Foster Kennedy as a sudden blanching of the brain when a general epileptic convulsion occurred during an oper-

ation in which the surface of the brain was widely exposed. Epilepsy seems to be a protective phenomenon to avert a dangerously falling blood pressure and dangerous alkalosis as the muscular convulsion with the arrest of respiration concentrates the carbon dioxide ratio and lessens the alkalosis. Epileptics belong to the vagotonic group of Eppinger and often manifest such vagotonic phenomena as urticaria, asthma, and migraine.

The hypothesis that the epileptic attack is an expression of excitation of the brain has been abandoned, and, with Hughlings Jackson, it is regarded as due to loss of function, local or general, in the brain. The positive events such as hallucinations and convulsions are regarded as release phenomena in lower regions of the nervous system following loss of function of the higher regions.

Treatment.—Epilepsy is fostered by inactivity of mind and body and warded off by activity. Hence, the excitation theory of the later Victorian period, which advocated rest and quiet, has given place to one of activity of body and mind. When such conditions as rickets, renal diseases, are present. they must be corrected. A ketogenic diet, rich in protein and fat and deficient in carbohydrate, is definitely beneficial. The medicinal treatment of epilepsy consists in the exhibition of Luminal, Bromides, and Paraldehyde, and in rare cases of Zinc and Belladonna. To get the maximum benefit, the drug must be exhibited before the anticipated attack, and if the remedies are not effective in ordinary doses, they will not be effective even in larger doses. Luminal is the drug of choice and the maximum dose for the 24 hours must not exceed 3 grains. Bromides may be used when Luminal fails or as an adjunct to Luminal; the maximum useful dose is not more than 30 grains per day for an adult. Where these fail, Zinc oxide, in 3 to 5 grains doses, in capsules, and Tincture Belladonna, in 10 minim doses, may be tried. Paraldehyde in four drachm doses dissolved in twice the amount of olive oil per rectum is effective in cases of *status epilepticus*.

V. G.

22 NERVOUS BREAKDOWN

C. P. SYMONDS

Guy's Hospital Gazette, Feb. 2, 1935.

The term covers an illness, or episode of disease, which is mental rather than physical, characterized by disorder or break-down at the highest level of nervous function.

Symptoms:

(1) *Depression*, with or without adequate cause, out of proportion to the facts of the patient's life.

(2) *Morbid feeling of fear*—free or attached—a dreadful feeling of fore-boding, as if something awful is going to happen, a feeling that he must have cancer or syphilis or heart disease.

(3) *Negative complaints*—absence of normal sensation of pleasure in relation to work, play, food, drink, or tobacco; less of sexual feeling and sense of mental fatigue.

(4) *Bodily symptoms*: fatigue occurring easily, pains in the back and limbs, headache, flatulent dyspepsia, constipation, palpitation, and insomnia are the common symptoms. The

symptoms are subject to many variations, depending on the degree of the morbid feeling, and the personality and character of the individual. There may be conviction of ruin or guilt, or certainty of cancer or syphilis, or negative symptoms may predominate. The patient is totally apathetic and indifferent.

The illness has a gradual or sub-acute onset, a subsequent development by degrees to its maximum, a prolonged course and a gradual recovery.

Etiology: The family history supplies the main factor. Individual attacks may be precipitated by emotional stress, excessive fatigue (mental or physical), insomnia (e. g., from pain), or intoxication (e. g., bacterial—influenza; chemical—alcohol). But in 90 per cent of cases no physical or emotional cause is to be discovered. It is the fashion now-a-days to call the mild cases of this illness *psychoneurotic depression* or *anxiety neurosis*, and at some point or other to draw a line separating these from the severe cases, which are called psychotic, manic-depressive, or melancholic. The distinction is usually held to imply that the two groups are of different nature and causation. In this sense it is wrong.

Treatment.—

(1) Radical: There is no short cut to cure in this disease.

a. Weir Mitchell, assuming that the causation of the illness was exhaustion and undernutrition of the nervous system, treated these with rest in bed, isolation and superabundance of milk. The difficulty of assessing the value of any such theory or form of treatment arises from the fact that these patients almost always get well.

b. Exponents of intestinal stasis or focal sepsis had their day (not to mention endocrinologists and osteopaths).

c. Freud and his disciples argued that these patients deny an adequate cause for their depression or anxiety, which really exists in the unconscious mind. If, by means of a special method of psychological analysis, the patient can be made to bring his conflicts into consciousness, he would make a satisfactory emotional adjustment and will recover. This method of treatment is a failure; patients treated by the analytical method do not get well any more quickly than those treated by other methods, nor are they any more free from the liability to recurrence. On the whole, it has done more harm than good in that it has inflicted a good deal of unnecessary mental discomfort upon patients already miserable with their illness.

(2) Symptomatic: The first principle in the treatment is to tell the patient that he is suffering from a genuine illness from which he will get well, and give it a name such as neurasthenia, nervous depression, or nervous breakdown.

The next step is to assess the degree of the illness or resources of the patient. In a mild and early case, a complete and restful change for a week or ten days, with adequate hypnotics, is worth trying. In the case of a man keep him at his work if you care, watching his ablity to carry the load. One man complains easily, another may go on to the point of suicidal despair without saying much about it. The former needs to be pushed, the latter spared. Increasing insomnia is an indication for lightening the burden.

The patient should be encouraged to talk to his doctor of any worries or troubles with which he is pre-occupied, and to accept advice and help in the management of current problems. Some near relative, husband, wife, parent or friend, should be interviewed, informed of the nature of the illness, and enlisted as ally. These patients need, and deserve, understanding and sympathy, though they may often need encouragement and persuasion as well. Nearly all these patients are better for some kind of physical treatment, be it medicine, helio-therapy, or massage. Changes in the form of physical treatment are obviously necessary from time to time. The treatment of insomnia is an important point, and *medinal* is the most useful. Of medicines, the old fashioned mixture of *bromide and strychnine* is valuable. A half-grain tablet of luminal as a remedy against intense waves of restless depression may have a physical as well as a psychological value. Alcohol as a refuge from depression is a danger; as an aid to digestion, it is useful. When sexual appetite is diminished or lost, the attempts at coitus are harmful, a fact of which both partners should be made aware.

(3) Preventive: When the liability is recognised much may be done in the way of preventive treatment. In childhood, the patient should learn to endure pain both physical and mental. So many boys are over-burdened at puberty with unnecessary fears. They believe that they are alone in their failures, that they have committed the unforgivable sin, that they are candidates for consumption or insanity. So much can be done for them by a frank exposition of the subject. On the physical side it should be remembered that a depressive illness may be precipitated by fatigue, infection, intoxication, or simple insomnia from physical pain or mental distress, and, in women, from childbirth. There is no doubt that, apart from the danger of habit formation, alcoholic excess may precipitate an attack.

K. L. N. R.

23 ACUTE INFECTIONS OF THE UPPER RESPIRATORY TRACT, MIDDLE-EAR AND MASTOID

J. R. PAGE and H. C. BALLENGER

Archives of Otolaryngeology, Oct. 1934.

The authors have attempted to picture the correct pathological background underlying the irregular and apparently erratic course of acute infections of the upper respiratory tract and its appendages. Their observations are based on elaborate bacteriological investigations during acute infections of this region in over 300 cases, and collateral findings of other co-workers. Their investigations included (1) cultures in each case of material obtained from strategic points along the tract, grown on a divided blood plate containing a special medium of brain, veal-agar and brain-heart infusion broth with normal blood serum, using small applicators through sterilized specula to avoid contamination, and (2) blood cultures during the height of the disease. They found that Streptococcus haemolyticus was accountable for nearly 31 per cent of these infections, while Pneumococcus Type III accounted for nearly 17 per cent of the cases. Haemolytic Streptococcus and Pneumococcus Type III occur more frequently than any other organism in infections of the middle ear and mastoid, and this necessitates a guarded prognosis because of the insidious and virulent character of such infections, and because of the severe involvement of the mastoid. The degree of mastoid involvement, however, does not solely depend on the virulence of the infection, but on the

patient's resistance as well, and on the anatomy of the particular mastoid which may retain or expel the infection. Too early an operation on a " green mastoid " is to be avoided; so also delay until the inner plate has softened. On the merits of myringotomy they found that almost three times as many operations on the mastoid were necessary in cases where the drum was allowed to rupture spontaneously as in those cases in which myringotomy was performed before rupture occurred.

The pathways of infection of the haemolytic Streptococcus from the nose and throat are—

(1) Direct extension by continuity of tissue as exemplified by mastoiditis and sinusitis.

(2) Extension by lymphatics as exemplified by cervical adenitis and retropharyngeal abscess.

(3) Bacteriaemia or a blood-borne infection from the upper respiratory tract.

This bacteriæmia is difficult to demonstrate by the usual methods of blood culture. The difficulties encountered may be—

a. The bacteria are not present in the quantity of blood with-drawn.

b. The showers of bacteria may not be present in the blood at the time the cultures are taken.

c. Improper technique, e. g., wrong culture media or too short a period of cultivation.

d. The filtration system of the blood stream, that is, the liver, spleen, lungs, finer capillaries, or the phagocytic cells (particularly of the reticulo-endothelial system) may remove most or all of the bacteria before they reach the vein of the arm or neck from which blood is usually taken for culture. There is experimental proof to show that the liver and spleen remove enormous numbers of bacteria injected into the blood stream of animals.

e. Recent studies in pleo-morphism and transumatation or dissociation of bacteria may explain the lack of positive blood cultures in many instances. If this is true, recognised strains may be in a filterable phase or may react unusually to the common staining methods.

The results of positive blood-cultures in various acute and chronic infections of the upper respiratory tract by different observers are not uniform on account of the above mentioned difficulties, but the importance of the positive results should not be under-estimated. If cultures had been made with blood from an artery the positive results would probably have been greater. Many infections of the kidneys, heart, brain and other vital organs, occurring during these upper respiratory tract infections, can be explained only by blood stream transmission. Admitting that the majority of these infections are due to haemolytic Streptococcus, and also admitting the probability of a becteriaemia from this source the following deductions can be made :—

1. With this apparent tendency of haemolytic streptococci to invade the blood stream or extend to the neighbouring regions during the acute stages of the infections, it is obvious that operations on the nose and throat should be deferred until a quiescent period is reached.

2. When, however, the infection extends to the middle ear, early paracentesis, as soon as bulging of the drum is seen, is indicated.

3. If mastoiditis develops, the question of operative intervention and especially when to do it, must be decided, each case being judged on its own merits. If one can wait three weeks from the onset of discharge with reasonable safety, it is desirable to do so, giving Nature a chance to throw up her protective barriers.

4. A transitory or an evanescent type of bacteriæmia is fairly common, and is possibly a usual complication following an acute infection of the upper respiratory tract. Unexplained fever, out of all proportion to the degree of involvement of the throat, can be explained by this bacteriæmia, the possible results of which are limited only by the distribution of the blood-stream.

M. S. R.

24 RADIATION IN THE TREATMENT OF CANCER

A. C. CHRISTIE

Journal of the American Medical Association, CIII, 1934, 985.

The rational basis for radiation therapy goes back to the early discovered fact that embryonal types of cells are more radiosensitive than adult forms. The shorter the life-cycle of the cell, the more sensitive it is to radiation, and *vice versa*. Among other factors that are equally important are the general condition of the patient and his reaction to radiation, the immediate tissue environment of the cancer (the cancer bed), and the relation of the growth to vital organs or important tissues that may suffer injury.

Except in superficial cancers in which it is possible to destroy the growth by the caustic effect of radiation, the single massive dose method has been practically abandoned. Some type of fractional dose is now in general use. The "saturation method" of Pfahler consists of administering a large initial dose and maintaining the radiation effect at a maximum by giving a small daily dose until the total dosage is attained. The Coutard fractional dose method of applying roentgen rays consists in giving a large total dose over a prolonged period (from 18 to 35 days), an equal amount being given daily until the total dose has been reached. Results have been obtained by this method which are superior to any previously thought possible. Holfelder has used a method that aims to take advantage of the large initial dose of the "saturation method" and subsequently to build up the dosage by the method of Coutard. The increased benefits from the fractionated dose method appear to arise from improvement in the ratio between the destructive effect on the neoplasm and the reaction in the surrounding normal tissues.

Progress has also taken place in methods of radium therapy especially in respect to interstitial radiation. The use of gold and platinum seeds was a great advance over glass seeds for the interstitial application of radon; the increased filtration lessens the danger of localized necrosis. The use of tubules, or needles from 3 to 6 cm. in length, with a very small amount of radon or radium element to the running centimeter, in the form of a grid, has secured a fairly uniform dosage. Further advance may be made in roentgen apparatus by securing

a much greater energy output by the use of tremendously higher milliamperage rather than by an increase in voltage.

Because of results obtained in large numbers of primarily inoperable and seemingly hopeless conditions and in recurrences after operation, and because of improvements in results when used in addition to surgery, the attitude towards radiation has radically changed during the past three or four years. Cancers of the skin have been treated by radiation methods almost from the time of the discovery of the roentgen ray. The basal-cell type, when it is small and doses not involve cartilage or other important structures, is readily curable. The fractional method of Coutard constitutes an epochal advance in dealing with lesions involving cartilage. The primary treatment of squamous-cell epithelioma should be a thorough irradiation of the entire lymphatic drainage areas by the fractional method. The added danger of dissemination must be weighed when biopsy is contemplated; it should be postponed until about two weeks after roentgen irradiation to lessen the liabitity of spread. If there is any residuum of the primary lesion it can be destroyed by electrocoagulation or by implanting interstitially gold or platinum radon seeds or small needles of radium element. If excision is to be done at all, it should always be preceded by irradiation.

K. R. C. H.

25 ENDOCRINE EFFECTS OF CERTAIN OVARIAN TUMOURS

EMIL NOVAK

The American Journal of Medical Sciences, CLXXXVII, 1934, 599

Certain tumours of the ovary, like tumours of other endocrine glands, are capable of highly developed endocrine functions. The two most clearly defined types are the granulosa-cell tumours and the so-called arrhenoblastomata. The latter belong to the group of testicular adenomata, and are most often of atypical variety.

The granulosa-cell tumours exert a feminizing effect, through the production of theelin by the tumour cells, so that in older women, perhaps far beyond the menopause, they produce most often a hyperplasia of the endometrium associated with periodic bleeding (pseudo-menstruation), together with increased size of the uterus. In the few cases seen in very young children, they have produced the syndrome of precocious puberty, with precocious menstruation.

The arrhenoblastomata, on the other hand, have a definitely masculinizing tendency, as might be expected from the fact that they apparently have their origin from undifferentiated epithelium in the region of the rete ovarii. Under conditions which are not clear, these cells, capable of development along either male or female lines, may assume definitely masculine tendencies. The relation of this endocrine cause of partial sex-reversal to the general problems of intersexuality, sex differentiation, and sex reversal is obvious, although our knowledge on these subjects is still far from complete. Patients suffering from arrhenoblastomata present in extreme instances such evidences of masculinization as a masculine type of hair distribution, deepening of the voice, and hypertrophy of the clitoris. Removal of the tumour brings about a regression of these symptoms.

K. R. C. H.

26 THE TREATMENT OF ANGINA PECTORIS

K. SHIRLEY SMITH

The British Medical Journal, 1935, i. 988.

Genuine and severe pain in the centre of the chest is most probably due to some form of angina pectoris, the pain being an expression of the myocardial ischaemia. This ischaemia may be *temporary* as during exertion when the heart muscle requires extra blood, when it is called *angina of effort;* this is by far the commonest form of angina. Or, it may be *paroxysmal* and arising *independantly of effort.* Permanent arrest of blood supply (coronary thrombosis) leads to infarction of the heart muscle, and in this condition the pain is prolonged for hours or days.

The treatment of angina is more the ordering of a mode of life than a therapeutic system. Work, recreation, hours of rest, diet, habits and temperament—all need investigation.

Mode of life: Such activities as do not induce pain are allowed. The degree of attack-producing exertion is remarkably constant and an intelligent patient frequently learns this and keeps within the limit. Strenuous exercise is absolutely forbidden. Sources of worry, anxiety and fatigue should be removed, and adequate rest—a minimum of 10 hours —enjoined.

Diet: Moderation in dietary without irksome restrictions should be aimed at. Meals should be small in bulk and taken with a minimum of fluid. In the spare, active type of patient, a tablespoonful of medicinal glucose in powder form may be given with the principal meals. Alcohol is best avoided and exercise after meals should be strictly forbidden.

Rest: Angina, becoming increasingly frequent and severe, or having origin in a recent coronany thrombosis, or supplemented with night attacks, or associated with active myocardial disease, should mean confinement in bed for a period of 2 to 3 weeks.

Medicinal Treatment:

During an attack: A premonitory pain or sense of constriction during exertion should call for immediate cessation of the work while a tablet of 1/100 gr. trinitrin is taken; this may be all that is needed to bring relief. For more severe pain an amyl nitrate capsule (5 min.) is inhaled. If the attack persists for an hour or more in spite of nitrites, coronary thrombosis has probably occurred and the patient should be put to bed and an injection of morphine, gr. ¼, given.

To prevent attacks: Over-exertion is avoided. Attacks tending to occur at particular times of the day are combated by taking trinitrin a quarter of an hour previously. Theobromine sodium salicylate, in 10 gr. doses, thrice daily, may be given as a routine, while in highly strung patients a combination of theobromine. gr. v, with luminal-sodium, gr. ½, may be useful.

For other symptoms: For a nervous and excitable patient a routine sedative such as potassium bromide, gr. x, with luminal gr. ½, at bed time, or twice daily, may be given.

Insomnia may be met by a draught containing potassium bromide gr. xx, and chloral, gr. x, or chloral hydrate gr. xx, or 3 drachms of the syrup. For flatulence a pill containing calomel, gr. 1/6, menthol gr. ¼, and powdered ginger, gr. ¼, may be taken thrice daily after food. For constipation, which *it is important to avoid*, liquid paraffin (with or without phenolphthalein), cascara evacuant, or senna tea will be found useful.

Drugs to avoid are adrenaline, ephedrine, and thyroid extract. Smoking is unwise.

Treatment of associated disorders: (1) *Obesity* presents particular difficulty since both exercise and thyroid medication cannot be used to reduce it. Regulation of diet should be mainly depended on to reduce weight. *Flat-foot* and other minor foot troubles associated with obesity will throw strain on the heart and should be corrected. (2) *Septic Foci* should be eliminated. (3) For *high blood pressure*, the above regime would itself be adequate. If persistently high, venesection is indicated and may be repeated if it is beneficial. (4) Angina associated with thyrotoxicosis should be treated by total thyroidectomy, the resulting myxoedema being subsequently corrected by thyroid medication. (5) In angina with *diabetes*, the coronary syndrome should claim prior attention, and it is wisest not to interfere too much with the diabetic condition, the patient being allowed to pass slight sugar and be mildly hyperglycaemic, since any undue lowering of the blood sugar by insulin may interfere with the nutrition of the myocardium and may precipitate infarction and sudden death. (6) *Anæmia* of the pernicious type will need liver therapy; for the microcytic or nutritional form *Pil Ferri*, gr. xxx t.i.d., or Ferri et Ammon. Cit. gr. xl, t.i.d., will be suitable.

Surgical Treatment is still largely in the experimental stage, although improvement has followed both paravertebral injection of alcohol and cervical or dorsal sympathectomy.

M. K.

CLINICAL MEMORANDA

TREATMENT OF SMALL-POX.

V. GOVINDAN NAIR, M.R.C.P (E.), F.R F.P.S.,
King George Hospital, Vizagapatam.

I have found injectable liver extract useful in the treatment of small-pox. It modifies the course of the disease, shortens the duration, aborts the eruption at all stages and avoids the consequent disfiguration from deep scarring and pitting. It also controls the toxic symptoms, improves the general health and well-being of the patient and prevents the development of the usual complications of untreated cases of small-pox as boils, subcutaneous abscesses, toxic rash, phlebitis, thrombosis, etc.

The treatment proper consists of daily intramuscular (intragluteal) injections of liver extract till the eruptions desiccate and incrust. Five c. c. of the extract should be given for the first two or three days according to the severity of the case, followed up by two c. c. daily for the remaining period. The extracts used by me were (1) Campolon of Messrs. Bayer—Meister—Lucius and (2) Injectable liver extract of Messrs. Bengal Chemical and Pharmaceutical Works, Ltd.

For full particulars please refer to the article entitled "Treatment of small-pox with Liver" in the *Journal of the Indian Medical Association*, July 1935.

REVIEWS

MATERIA MEDICA OF PHARMACEUTICAL COMBINATIONS AND SPECIALITIES. By U. B. Narayanarao. Bombay: The Ryan Pharmacy, 1932. Pages xliv plus 249.

This volume is a compilation giving particulars of the various proprietary medicinal preparations on the market. While we do not deny that there is a need for such a publication to assist the prescribing physician in the choice of the particular proprietary medicine he would employ in any given case of disease, we consider that the present volume does not furnish the necessary information on which the physician could make a proper choice. For, the details given with regard to the preparations listed are only those furnished by the respective manufacturers, which in most instances are likely to be exaggerated, and no effort has been made to indicate how far in actual medical practice, as recorded in current medical literature, these preparations have proved the claims made for them. In the extensive medical literature of the present day, notes on, and references to, proprietary preparations are found in abundance, and their therapeutic indications and efficacy are discussed. We suggest that in listing proprietary medicinal preparations in a *Materia Medica* references be made to such notes and discussions in the literature so as to enable the medical practitioner to decide which preparation is best suited in any given case. The absence of such references detracts considerably from the usefulness of the present volume.

THE MADRAS MEDICAL DIRECTORY, 1935. Published by T. S. Lakshmipathy, Madras.

The second edition of the *Madras Medical Directory* published by Mr. T. S. Lakshmipathy is a distinct improvement on the first edition. The volume is much increased in size by the addition of matter which should be very useful to the public and the profession. There is great need for a dependable volume of reference where the addresses and other particulars of medical men scattered over all parts of the Presidency could be readily obtained. That would be the first step in the organization of the profession. We hope, therefore, that the medical practitioners and others concerned would help the publisher by furnishing him with the change of address and other particulars which may occur to their knowledge. We trust that this Directory would be published annually with all the necessary alterations and improvements.

JOURNAL OF SOUTH INDIAN MEDICINE
JUNE, 1935

THE PROBLEM OF TUBERCULOSIS

India has many problems of public health to solve. From time to time some one or other of these engages the attention of the press and the public. Strenuous efforts are put forth towards the solution and a good beginning is made. In the meantime some other question comes to the fore, and the task well begun is half forgotten and gradually allowed to stagnate and get worse. Epidemics which set in with dramatic suddenness and result in fearful mortality arrest the attention and spur the Public and the Government on to take some measures of control. But in most cases these measures are temporary, and when the worst is over, things are again allowed to drift. But very little is of heard of diseases like tuberculosis which set in insidiously and kill slowly. Medical practitioners are familiar with the increasing incidence of the disease. And they are very much distressed by their helplessness in the control of the condition.

A few decades ago there was some activity on the part of the medical and public health departments of this province over the control of tuberculosis. A few institutions were established where the disease could be carefully studied and the unfortunate patients efficiently advised. It was expected that such facilities would increase rapidly. At the end of twenty years one finds that the progress has been negligible. In the meantime the disease is spreading alarmingly and is carrying misery into many families. It is getting so common that medical men are not surprised to find it in all classes of the community. It is, therefore, more than ever necessary that concerted measures should be taken to check the spread of the disease and to minimise the death-roll caused by it. The magnitude of the task and the amount of money that is required to produce even fair results often frighten the Government into inactivity. The Government may be poor, and the economic condition of the country not favourable. But it is exactly under these conditions that the disease spreads wide and kills largely. Poverty of funds, therefore, instead of being used as an excuse for an attitude of fatal resignation, should stimulate the authorities to

devise means by which the work of amelioration could be carried out economically. Extensive sanatoria with imposing piles of buildings far away from thickly populated places are not certainly the most profitable way of spending limited resources. Nor private dwelling-houses improvised into wards and office-rooms the most suitable buildings for housing central Presidency Hospitals for dealing with tuberculous patients. Apart from sites and buildings, the staffing of the existing institutions is neither effective nor economical. The medical department in this country has long been used to deal with paid staff. Since the funds available have been limited, naturally the staff has been small and the sphere of activity limited. So long as its work in this limited field has been satisfactorily done, the department has been willing to let things alone. When any expansion of its activities was called for, it was always planned within its capacity to employ additional staff. This narrow outlook has been responsible to a large extent for many of the defects in medical relief in this country. If, instead of relying solely on the revenues of the country, the Government would earnestly seek the co-operation of the Public, and the Medical Profession particularly, we are sure a vast deal more could be done to expand rapidly medical relief in all its aspects in this Presidency. Those who may be reluctant to believe in the fruitfulness of this co-operation of the medical profession should study the reports on the administration of the medical department and the civil hospitals in the Presidency presented by Major-General Sprawson while he was in Madras.

THE VIZAGAPATAM MEDICAL COLLEGE

The Vizagapatam Medical College has been engaging the attention of the Government and others for some time. This College has not yet been recognized by the Indian Medical Council as efficient enough. We learn from the papers that there were a series of conferences over this subject. We are glad to find that the Government have agreed to find the necessary funds to improve the conditions in the college so that it might be soon given the hall-mark of recognition by the Indian Medical Council. But we must sound a note of caution in this connection. There is a common impression that the efficiency of an institution increases in proportion to the amount of money spent on it. But experience has generally been otherwise. Institutions where much of the available funds has been lavished on buildings and additional staff often show a poor out-turn compared to those whose buildings are modest and staff humble. Many of the missionary institutions in this presidency prove this fact: what tells is

efficient equipment and zeal on the part of the staff. We do not suggest that any teacher should be paid less than his due. But we object to unnecessary multiplication of jobs or ostentatious raising of so-called status of the teacher. The status of the teacher depends on his standing in the professional world and his contribution to the enrichment of the subject he deals with and on nothing else. We fully hope that the Government will bear this in mind when they actually plan for the expenditure of their money on the Vizagapatam Medical College.

Colonel E. W. C. BRADFIELD, O.B.E., C.I.E., I.M.S.

Surgeon-General with the Government of Bombay.

We are very glad to learn that Col. E. W. C. BRADFIELD, O.B.E., C.I.E., I.M.S., has been appointed Surgeon-General with the Government of Bombay. We, in Madras, feel highly gratified that an officer who has been with us, and whom we can with justifiable pride call ours, has been given this high appointment. Col. BRADFIELD came to Madras in 1912 and, except during the Great War, in which he served with distinction, he remained in the Province till he reverted to the Army early in 1931. He has been for several years a Surgeon in the General Hospital, Madras, and has held appointments as Professor of Anatomy, Professor of Biology, and Professor of Surgery in the Madras Medical College. During the last 5 years of his service here he was Superintendent of the General Hospital, in which capacity he distinguished himself as a capable administrator. He was mainly responsible for the many improvements which have been made in the General Hospital in recent years, and in recognition of his services (both as Surgeon and Superintendent) the new surgical block of the Hospital has been named THE BRADFIELD BLOCK after him. He has also acted as Surgeon-General with the Government of Madras. He goes to Bombay, as an experienced Medical Educationist and Administrator, and we are sure the destinies of the Medical Department of Bombay will find able guidance at his hands. We congratulate Col. BRADFIELD on his appointment, which he fully merits.

RETRENCHMENT IN HOSPITAL EXPENDITURE

We learn from the papers that the Government are appointing a special officer to investigate into the possibilities of economizing. As usual in retrenchment procedures, they are beginning at the wrong end. The money spent on diet and drugs is not much more than a fifth of the total

expenditure on civil hospitals and dispensaries. About half the real expenditure goes towards the Medical Staff. To think of appointing a special officer to advise on the possibilities of saving a moiety of the fifth part while leaving alone the major portion would strike any one except the Medical Department and the Government as absurd. And yet, here is the proposal. We do not know anything about Col. Dyer who is expected to be the special officer. But if he comes with the idea that very much could be done in the way of retrenchment in drugs, diet and menial establishment, he is likely to be disappointed. It is more probable that a careful enquiry into the working of the hospitals would reveal the necessity for increase in the menial staff and more adequate supply of newer drugs and appliances. It is not uncommon to find hospitals which claim to be first class and model institutions condemned to carry on their work of treatment and investigation of diseases with rickety microscopes and inefficient instruments. The Government, if it means business, should look for real economy elsewhere. We wonder if the Government has taken the advice of the head of the department before venturing on their policy.

MEDICAL PERIODICALS

THE INDIAN MEDICAL GAZETTE

VOL. LXX. NO. 4. APRIL, 1935.

The Incidence of Pneumococcal Types in Pneumonia in Assam, L. Everard Napier and Dharmendra, *p. 181.*

"The sputa from 65 cases of pneumonia were investigated with reference to the species and type of streptococcus that predominated. Direct typing, mouse inoculation and cultural methods were used. Five strains were identified as hæmolytic streptococci and 60 strains as pneumococci. Of the 60 pneumococcal pneumonias 15 were broncho-pneumonia and 45 lobar. Of these 60 strains, 8 belonged to the 'fixed' types, 24 to other American types, and 29 were not identifiable with any sera we had in our possession; by the preparation of high-titre sera, 22 of the unidentified group were shown to belong to one of two types; these we have provisionally called A and B. Our type A was not associated with any mortality and appears not to be a virulent type. Type B was responsible for three deaths in 7 cases of lobar pneumonia whose fate was known; on the other hand 4 out of the 15 strains from cases of broncho-pneumonia and 3 out of 12 strains from normal throats were type B. It is evident that there is little 'fixed' type pneumonia in this district and therefore commercial therapeutic serum is not likely to be of much use in treatment. It is considered that type B is probably a strain with virulent potentialities that has a wide-spread distribution in the area in which we were working. If further experience shows that our type B pneumococcus is common in other districts in Assam and in other years, the question of making serum against or vaccines from this organism should be considered."

Preliminary Observations on a New Soluble Atebrin Compound, John R. Blaze and A. T. W. Simeons, *p. 185.*

"(1) The intramuscular injection of atebrin musonate in therapeutic doses does not give rise to toxic or unpleasant symptoms. (2) While a single injection of 0·375 gramme of atebrin musonate has in some cases a remarkable effect on the clinical picture, a recrudescene usually occurs within a few days. Heavy malignant tertian infections are only slightly influenced. (3) Two injections of 0·375 gramme given on successive days are sufficient to control within 48 hours the temperature, and in a maximum of 4 days all forms of benign tertian parasites, and the ring forms of malignant tertian. Crescents appear to be in no way influenced, and must be destroyed by plasmochin. In some cases there is a reappearance of parasites in the blood after a few days, but they disappear spontaneously. In no case hitherto observed has there been a return of fever after 2 injections. We are dealing with unusually heavy infections in a poor and mostly underfed class of patients. (4) The intravenous route though harmless is not satisfactory for routine treatment.

(5) The theoretical considerations already set out are supported by the result obtained. Atebrin musonate is a drug worthy of further investigation. (6) The immediate results of treatment with atebrin musonate appeared to be good enough to justify our making this preliminary report. But the period of observation has not been long enough to enable us to compare the relapse rate after atebrin musonate with that after oral atebrin or quinine. Observations upon this important question are being made."

Habitual use of Barbituric Acid Derivatives in India, R. N. Chopra and G. S. Chopra. *p. 188.*

"(1) The use of barbituric acid derivatives has greatly increased in India during the last few years. These compounds have powerful hypnotic and pain-relieving properties being only second to opiates in this respect. (2) The fact that this group may produce toxic effects even in therapeutic doses and are cumulative in their action has not been sufficiently appreciated by the medical profession. (3) Their repeated use is harmful and dangerous, definite pathological changes being produced in vital organs. No tolerance is developed and any increase of dose may give rise to dangerous symptoms and even fatal results. The margin between toxic and therapeutic doses is very narrow and certain individuals are particularly susceptible to the action of these drugs. Caution is therefore recommended in their use. (4) Habit formation has occurred with these drugs in Indian subjects, but the desire for the repetition of the dose is more for relief of symptoms than anything else. They do not appear to produce euphoria like opiates, hemp drugs and alcohol. Abstinence symptoms are not produced and habit can be easily broken. (5) The need for bringing this group of drugs under control, similar to that exercised in Great Britain, is emphasized."

Bernhardt's Syndrome, E. Muir and S. N. Chatterji, *p. 192.*

The Reticulo-Endothelial System in Malarial Haemoglobinuria of Monkeys. Part I. K. V. Krishnan, *p. 193.*

"1. The reticulo-endothelial system probably plays an important part in the aetiology and prevention of malarial haemoglobinuria. 2. When the system is depressed, as is evidenced by a low reticulo-endothelial cell count and inability to take up large quantities of vital dyes, sudden severe haemolysis results in haemoglobinuria. 3. When the system is active and functioning properly, as is evidenced by a high reticulo-endothelial cell count and ability to engulf large amounts of vital dyes, sudden severe haemolysis does not result in haemoglobinuria."

The Reticulo-Endothelial System in Malarial Haemoglobinuria of Monkeys, Part II. K. V. Krishnan, and B. M. Ghosh, *p. 197.*

(1) Removal of the spleen in monkeys infected with *P. knowlesi* intensifies their infection and increases the incidence of haemoglobinuria. (2) Treatment of monkeys showing haemoglobinuria with quinine is unsatisfactory. It is even less effective in splenectomized animals. (3) The results recorded in this paper stress

the importance of susceptibility in haemoglobinuria and suggest that the spleen and the reticulo-endothelial system play an important part in this susceptibility.

A Preliminary Note on the Cultivation of Vaccinia Virus on the Chorioallantoic Membrane of Chick Embryo, K. S. Shah, *p. 200.*

A Hygienic Method of Composting Refuse with Night-Soil, J. J. Rao. *p. 202.*

The Value of Phrenic Exairesis in the Treatment of Pulmonary Tuberculosis, P. V. Benjamin. *p. 207.*

"The paper reviews 275 cases of phrenicectomy done at the Union Mission Tuberculosis Sanatorium, Arogyavaram, near Madanapalle."

"The analysis of the results of treatment with phrenicectomy show that the operation is of considerable value, but mostly so when it is used to aid the collapse and healing in partial artificial pneumothorax. While its effect when used alone in cases with fever is not marked, it does cause a considerable increase in the percentage of cases losing bacilli from the sputum."

JOURNAL OF THE INDIAN MEDICAL ASSOCIATION

VOL. IV. NO. 8. APRIL, 1935.

On The Possible Role of Inanition in the Aetiology of Beri-Beri Etc. D. D. Chatterjee. *p. 309.*

(1) Animals fed on a diet deficient in Vitamin B starve in the midst of plenty. (2) The structural and functional changes which take place in the intestines of fasted animals and of animals presented with a diet deficient in Vitamin B are similar. (3) It is concluded that the symptoms which follow on a deficiency of Vitamin B are due to two processes: (a) A starvation process — this is a constant process and is possibly due to a duodenitis depriving the animal of hunger sensation. There may also be changes in the capacity to smell. (b) An infective process — this is probably variable, and may or may not be added to the former according to the environment.

The Role of Malaria in the Causation of Cirrhosis of the Liver—A Preliminary Note. T. S. Tirumurti and M. V. Radhakrishna Rao. *p. 315.*

The common association of malaria and cirrhosis of the liver in India has given rise to divergence of opinion regarding the role of the former in the causation of the latter. Brief reference is made to the views of some of the workers in India and the importance of the problem is pointed out. Judging from personal experience it is concluded that malaria per se is not a direct cause of cirrhosis of the liver.

Preliminary Report on a New (?) Strain Isolated From C. S. F. of Epidemic Meningitis Cases 1934. Benode Behari Sen, J. N. Naha, S. C. Bhattacharyya and S. C. Acharjya, *p. 318.*

Puerperal Sepsis, C. L. Houlton, *p. 321.*

VOL. IV. NO. 9. MAY, 1935,

The Reticulocyte Count in Malaria and Kala-Azar and its Significance, T. Bhaskara Menon, T. K. Krishnaswamy, and D. R. Annamalai. *p. 359.*

(1) Studies on untreated cases of malaria have shown that the reticulocyte count in such cases is slightly higher than the normal. The count is generally higher in chronic relapsing malaria than in acute attacks. (2) No definite relation could be made out in untreated cases between the reticulocyte count and the count of the red blood cells. (3) Some evidence is brought forward to show that cases of untreated kala-azar give on an average, higher counts than acute malaria. (4) The reticulocyte behaviour in malaria and kala-azar is regarded as due to the action of two differing mechanisms; in the former a haemolytic anaemia is followed by a reaction of active haemopoietic tissue, while. in the latter, there seems to be an irritation of the displaced and compressed erythrogenic tissue, by parasitic invasion of the reticulo-endothelium.

Studies on the Biochemistry of Cerebrospinal Fluids of Epidemic Meningitis in India (1933—34), S. Hazra. *p. 364.*

The Operative treatment of Vesico-Vaginal Fistula, W. C. Paton. *p. 368.*

Insuring Against Sickness, Benoy Kumar Sarkar, *p. 371.*

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ASSOCIATION NOTES

COIMBATORE MEDICAL ASSOCIATION.

The ninth annual meeting of the Coimbatore Medical Association was celebrated on 7th December 1934 in the Moses Gnanabaranam Eye Hospital. The proceedings began with the Annual Dinner. About 40 members attended the function.

1. After dinner, the secretary's report and accounts were read and recorded. 2. The association recorded its appreciation of the work done by Dr. Gurupatham during the present year 3. The office bearers for the year 1935 were elected.

Patron:	...	Major Cox, I.M.S.
President:	...	Dr. Anantharanga Rao.
Vice-President:	...	Dr. Pratab.
Secretary:	...	Dr. N. Krishnaswami.
Associate Secretary:	...	Dr. P. Robert.
Committee Members:	...	Dr. Mrs. Abraham
		Dr. Gurupatham.
		Dr. Viswanathan.

4. Then the following proposition moved by Dr. Sundararayan and seconded by Dr. Gurupatham was passed.

> "Doctors of Coimbatore not residing in the Coimbatore municipality, shall be admitted as Associate Members on paying an annual subscription of Rs. 3 in advance.
>
> Note—Such touring officers whose headquarters are at Coimbatore but who spend the major part of the month touring in the District shall be admitted as associate members.

5. The members recorded and conveyed their appreciation to the mission authorities of the Moses Gnanabaranam Eye Hospital for allowing the use of the premises to the association.

6. With the President's closing remarks and of the old and new secretaries the meeting came to a close.

THE KISTNA DISTRICT SUBSIDISED RURAL MEDICAL PRACTITIONERS' ASSOCIATION.

An ordinary meeting of the above Association was held on 22nd December 1934 (Saturday) at 11-30 a.m. at Bezwada in the local X-ray institute. As the District Medical Officer could not preside over the meeting owing to some domestic inconvenience one of the Rural Medical Practitioners was elected to the chair. The minutes of the previous meeting

read by Mr. N. Rama Rau, the Secretary, were duly adopted. The meeting later on passed the following resolutions which were unanimously carried, one of which was a condolence resolution upon the demises of Dr. A. Hanumantha Rao of Chimalapadu and Dr. M. S. Krishnamurthi Ayyar of Madras and the others.

(1) This Association places on record the noble services rendered by its ex-president Dr. P. R. Venkatrama Iyer, M.B.,C.M., D.M.O., Nellore, and resolves to convey their heart-felt gratitude to him.

(2) This meeting views with great concern the G. O. No. 2483 dated 25th October 1934 fixing the hours of work of the Rural Dispensaries in the evening also, which is detrimental to the interests of the medical practitioner, in regards to their private practice, the Rural Medical Practitioner having been described by the Government several times as being neither a servant of the Board nor of the Government, and requests the Government to so modify the present order as to insfst if so required on a greater length of time of the Dispensary work in the mornings only than the time (viz., 7-10 a.m.) now fixed rather than require them to work in the evenings.

The meeting came to a close at 1 p.m. and the Secretary thanked Dr. S. Sivaramakrishnan of the X-ray institute who was *at home* that evening to the members of this Association as well as of the District Medical Association who also met the same evening.

THE ANDHRA MEDICAL ASSOCIATION, BEZWADA.

An Appeal.

The Andhra Medical Association is formed under the Presidentship of Major M. G. Naidu of Hyderabad who has started work. Its success in serving the needs of the Medical Profession depends upon the amount of patronage the medical profession in the Andhra Province gives it. Heads of Medical Associations in the Andhra Province are, therefore, requested to affiliate their association with the Andhra Medical Association. Doctors in the area will kindly help the Association by becoming members of the Association either directly or through an affiliated Association.

The undersigned will be glad to furnish particulars.

DR. C. SURYANARAYANAMURTY,
Honorary Secretary.

LIBRARY
23 FEB 1935

THE SOUTH INDIAN MEDICAL UNION, MADRAS

JOIN THE UNION NOW!

The Council of the South Indian Medical Union have great pleasure in inviting all Independent Medical Practitioners to join the Union.

The Independent Medical Profession of South India has for a long time been labouring under many disadvantages. Till recently, the Public and the Government ignored even the existence of an Independent Medical Profession in this country. During the last few years, thanks mainly to the efforts of the South Indian Medical Union, both the Public and the Government have been made aware that there is an Independent Medical Profession in South India. But even to-day the Independent Medical Profession is not accorded either by the Public or by the Government the recognition it deserves. The realization that the members of the Independent Medical Profession are as much the guardians of the health of the people as the members of the paid Medical Services of the State has yet to come. Till such realization comes the Independent Medical Profession will have to labour under the many disadvantages it had to put up with these many years. It is, therefore, necessary that the Independent Medical Profession of South India should organize itself, have representatives in the Medical Councils and Institutions of the country, take part in discussions and deliberations on all Medical matters, and thus make its voice heard throughout the length and breadth of the land. The organization is not wanting; there is the South Indian Medical Union which has been in existence many years. But it needs strengthening: every member of the Independent Medical Profession should join it and ensure that it is powerful enough to fight for the rights of the Profession.

The South Indian Medical Union has played an important part in the past in bringing about various medical reforms in the Madras Presidency. The appointment by the Government of Honorary Medical Officers in State Hospitals has been mainly due to the strenuous work done by the Union, and the Union is even now engaged actively in the further extension of such appointments. Attempts by the Union to improve the status of the members of the Independent Medical Profession have resulted in the modification of the rules regarding the validity of medical certificates issued by Independent Medical Practitioners. The Union has been to a great extent responsible for the abolition of the four-year L. M. P. course and its substitution by one of five years' duration. In many other matters also the Union has been active, though with much less direct results.

A problem which has been engaging the attention of the Union for the last few years is the restriction of the private medical practice of Medical men in the Services; another is the representation of the Independent Medical Profession in the Academic Medical Institutions of the country; and a third is to make the authorities grant independent medical practitioners facilities for post-graduate Medical studies in the State Medical Institutions. To achieve success in this just fight for the rights of the Independent Medical Profession, it is necessary that the Union has the support of every Independent Medical Practitioner in the country.

The South Indian Medical Union feels that it can put up a strong fight and obtain recognition of the rights and redress of the wrongs of the Independent Medical Profession if it has the solid support of the Independent Medical Profession in South India. The Public and the Government may not deny us our rights if we ask for them, every one of us joining whole-heartedly in the demand. The Union expects every member of the Independent Medical Profession to be on its rolls so that it can, with the Independent Medical Profession solidly behind it; make its demands. We request you, therefore, in the interests of the Independent Medical Profession to become a member of the Union.

The Union maintains an official organ, the *Journal of South Indian Medicine*, which is supplied free to every member. Its columns are open to every member of the Union to express his views on all matters affecting the Medical Profession; and it is a medium for conveying to the members of the Union the latest advances in medicine.

Kindly send your applications immediately to the General Secretary, South Indian Medical Union, Egmore, Madras.

MEMBERSHIP FEE

Ordinary Members	Rs. 10 per annum
Associate Members	Rs. 3 per annum

General Secretary

ASSOCIATION NOTES

SOUTH INDIAN MEDICAL UNION

An Extra ordinary General Meeting of the South Indian Medical Union was held on Saturday, January 19, 1935, at 6-15 p.m. at 32 Broadway, with Dr. E. V. Srinivasan, President of the Union in the Chair, to express condolence at the untimely and sad demise of Dr. T. Krishna Menon, Publicity Officer of the Union.

1. A resolution of condolence passed at a meeting of the Coimbatore Medical Association was read.

2. The letter from Dr. C. R. Krishnaswami, expressing regret at the loss sustained by the Union by the death of Dr. Krishna Menon, was also read.

3. The following resolution was moved from the Chair and passed, all standing:—

The South Indian Medical Union record their deep sorrow at the loss they have sustained by the untimely death of Dr. T. Krishna Menon, the Publicity Officer of the Union.

It was resolved also that the above resolution be communicated to the bereaved family, to whom the Union send also theit heart-felt condolence.

We have received the following letter from Havero Trading Co., Ltd., Bombay.

"We deeply regret to learn of the sad demise of Dr. T. Krishna Menon the late publisher of your Journal. In him we have lost not only a sincere medical worker but also a personal friend. We record our sympathy and condolence for the occasion. Please convey the same to his bereaved family."

COIMBATORE MEDICAL ASSOCIATION

The following resolution of condolence was passed at the meeting of the Coimbatore Medical Association held on 12-1-1935.

"This Association places on record its deep sense of sorrow at the untimely loss of Dr. T. Krishna Menon, one of the brightest members of the Independent Medical Profession."

THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

A monthly meeting of the above Association was held at 5 P.M., on Friday the 18th instant in the Railway Hospital, Golden Rock, when Dr. R. A. Johnson was "At Home". About 40 Doctors attended. Dr. C. E. R. Norman presided in the earlier part and Capt. Sanghamlal later.

Before the proceedings commenced the following resolution was moved from the chair and passed, all standing.

"This Association grieves the sudden and untimely demise of Dr. T. Krishna Menon, M.B.C.M., L.R.C.P., M.R.C.S , of Madras and places on record its appreciation of his interest in this Association."

Dr. S. T. Achar, M.D., of Tanjore, delivered an interesting lecture on "Medical Practice in the Moffusal", and explained the need for keen and careful examination of the cases and how the average practitioner could get the aid from the Laboratory. Correct diognosis was essential for treatment. He dilated upon anæmias and stressed the necessity of differentiating the various anaemias as on that depended correct treatment. He showed a number of X-ray plates on various diseases. After the lecture there was a discussion.

The report of the Journals' Sub-committee was then discussed and it was resolved that members who are not in arrears of subscription would be eligible for Journals by paying an earnest money of Re. 1. The following Journals will be available for circulation:—1. *British Medical Journal*, 2. *Lancet*, 3. *Practitioner*, 4. *Indian Medical Gazatte*, 5. *Clinical Journal*, 6. *The Antiseptic.* It was also resolved that a small sub-committee be in charge to publish a monthly Miscellany, containing reviews of Journals, original articles, case notes, etc., which will be issued free to all Members.

The meeting broke up at 8-30 P.M. after dinner,

THE SOUTH KANARA DISTRICT MEDICAL ASSOCIATION

The following resolution was passed by the Executive Committee of the South Kanara District Medical Association at its last meeting.

3. Read letter from the Sub-assistant surgeons in L. F. Service, regarding the indequacy of the new scale of pay, as sanctioned in G. O. No. 2403 P. H. d. 15-10-1934, by Government.

Resolved (a) that the Executive Committee of this Association is strongly of opinion, that the scale fixed in the above G. O., is not commensurate with the nature of work turned out by all classes of L. F. Medical Officers, as they have to do the same work that is being turned out by Government Medical Officers. The committee therefore requests Government to reconsider their decision and fix the same scale as for Government Medical Officers.

(b) The Honorary Secretary is authorised to communicate the above resolutions to the Government, the press and the District Board.

NOTES ON PREPARATIONS, APPLIANCES, ETC.

[This section is devoted to brief notices of drugs, preparations, and appliances which have been submitted to us for trial, and which after the necessary tests we can recommend as reliable. The number of proprietary preparations on the market is so large, and the number is steadily increasing, that it becomes exceedingly difficult for the practitioner to become familiar with more than a limited number of them. Further, he is often bewildered by the claims made for many of these preparations: the advertising art has made the correct discrimination between the reliable and the unreliable preparations no easy matter. We have decided, therefore, in the interests of our readers to notice briefly those preparations which on trial have been found satisfactory.]

HEMOGONON—manufactured by L'ORGANOTECHNIE, Paris. This is a very palatable preparation which is said to contain Haemoglobin, Liver extract, and Glycerophosphate of Iron. We have tested it clinically in cases of severe anaemia and found it useful. Supplies can be had of Messrs. *G. Loucatos & Co., Esplanade, Madras.*

PANDIGAL—prepared by BEIERSDORF LTD., Herts, England. It is a stable, standardised preparation of *Digitalis lanata.* It contains a single active principle, *lanadigin,* and it can be kept without loss of potency for a long time. We have submitted it to prolonged clinical trial and found it of great value in the treatment of heart disease, especially heart failure. It can be administered orally, *per rectum*, or intravenously. Gastro-intestinal symptoms do not arise even on prolonged administration, and a full digitalis effect is obtainable without untoward cumulative effect. (See also *Indian Journal of Medical Research*, Oct. 1934, p. 279 *et seq.*)

ASSOCIATION NOTES

THE SOUTH KANARA DISTRICT MEDICAL ASSOCIATION

Proceedings of the 3rd General Body Meeting held in the Wenlock Hospital at 5 p.m. on 23—2—1935.

(1) That this meeting of the Association places on record its deep sense of sorrow at the untimely demise of Dr. T. Krishna Menon, M.B.,C.M., L.R.C.P. (Lond.), M.R.C.S. (Eng.), on 11—1—1935 at Madras, a staunch worker on behalf of the profession, and offers its condolences to the members of the bereaved family. Moved from the chair.................Passed unanimously all members standing.

(2) That this meeting of the Association places on record its deep sense of sorrow at the untimely demise of Dr. B. S. Mallaya M.B.,C.M. on 29—1—1935 at Madras, an illustrious son of South Kanara. This meeting places on record also its appreciation of his untiring zeal for public work, political, social and professional. This meeting offers its condolences to the bereaved family...............Moved from the chair.........................Passed unanimously all members standing.

(3) The Honorary Secretary is authorised to communicate the above resolution to the members of the bereaved family and to the press.

(4) Read (1) G. O. No. 2480 P. H. 25-10-1934.

(2) Memorandum from Dr. Ramasubbu, Secretary, Madras Provincial subsidised (rural) Medical Practitioners' Association, d. 6-12-1934 to the Hon'ble Chief Minister on the above G. O.

The rural Practitioners present explained their difficuties with regard to the working of the Government Order.

Resolved (a) that this meeting of the Association is of opinion that this G. O. is a real hardship to the rural subsidised Medical Practitioners, is contrary to the spirit of the scheme, as it does not give them enough time to attend to their outside calls, and requests the Government to restrict the working hours to mornings only.

(b) That the Honorary Secretary is authorised to Communicate the above resolution to the Government, the Surgeon General. the District Medical Officer, District Board President, and the press and to Dr. Ramasubbu..................Dr. M. R. Kamath proposed. and Dr. U. P. Mallaya seconded.....................Passed unanimously.

COIMBATORE MEDICAL ASSOCIATION

The monthly meeting of the above association was held in the Radiology Block of the Government Headquarters Hospital on 9-2-35 at 5. 30 P. M. with Dr. Anantharanga Rao in the Chair. Dr. T. V. Raguthma Rao was 'at home' to the members. After tea, Dr. P. Rama Rao D.M.R., of Madras delivered an interesting lecture on 'X-rays in diagnosis of diseases of the gastro-intestinal tract'. The lecture lasted for an hour and a half. He also exhibited about 40 beautiful skiagrams of very interesting and instructive cases. About 35 members attended the meeting. The lecturer also requested the members to join the South Indian Medical Union. With a vote of thanks from the president the meeting came to a close at about 7. 30 P. M.

THE TINNEVELLY MEDICAL ASSOCIATION, PALAMCOTTAH

ANNUAL REUNION AT TINNEVELLY

The Sixth Annual gathering organised by the Tinnevelly District Medical Association commenced at 4-30 P.M. on 23rd February 1935 in the premises of the Hindu College, Tinnevelly, under the presidency of Dr. T. N. Govinda Ayyar, M.B. & C.M., Independent Medical Practitioner. Besides 88 members, some ladies and local officials and citizens also attended the function including Mrs. Ponnuswami and Mr. Sadhu Ganapathi Pantulu. Four members of the Travancore Medical Association including Dr. Taliat, F.R.C.S., and Dr. Dasannachar, M.B. & C.M., and Dr. Saiyid Gulam Hussain Sahib, the new Civil Surgeon of Tuticorin, also graced the occasion.

The guests were entertained to tea and light refreshments by Messrs. Havero Trading Co., Ltd. After Photo the gathering were entertained with melodious music by (1) Dr. J. Sankarasubba Raju, (Vocal) (2) Dr. L. Mahadevan, M.B.B.S. (Mad.), D.O.M.S. (Lon.), (Gottuvadayam). The dancing in costume of Dr. N. Lakshmanan was simply charming.

Then the business proper of the gathering commenced. Lieut. Col.

T. S. Shastry, I.M.S. welcomed the guests. The Secretary, Dr. V. Sankarasubban, M.B.B.S., read the new Rules of the Association which were unanimously passed. Lieut. Col. T. S. Shastry's addendum that Ex-members whose work deserves recognition and distinguished members of the Profession who are working outside the District may be made Hony. Members of the Association was unanimously accepted.

Office-bearers for 1935 were elected unanimously: Lieut. Col. T. S. Shastry, I.M.S., President, Dr. N. Isaac of the Head Qrs. Hospital, Palamcottah, as Secretary and Treasurer. Dr. T. N. Govinda Ayyar, M.B. & C.M., of Tinnevelly, was installed as the President of the Annual Reunion. The Annual Report of the Association was read by the Secretary and adopted. Lieut. Col. T. S. Shastry, I.M.S., delivered an interesting and instructive lecture on Menstruation and Menopause.

A woman with out-turned feet on undeveloped legs, and hands like the cloven feet of a cow, but otherwise very sturdy and well-nourished, and aged 30 years, was exhibited by Dr. Mrs. A. Brown. Then interesting notes of the following cases operated on at the Head Quarters Hospital were read out:—

(1) Cæsarean Section. (2) Fracture of leg owing to the spread of epithelioma of skin. (3) Tubercular testes. (4) Dermoid of Scalp. (5) Glioma of eyeball.

The President brought the meeting to a close by his eloquent address on the subject spoken by Lieut. Col. T. S. Shastri, I.M.S. With a vote of thanks proposed by Dr. V. Sankarasubban, M.B.B.S., to the guests and members, the meeting terminated. Thereafter an excellent dinner prepared by the "Chandra Vilas" brought the happy gathering to a close late at night.

THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

(REGISTERED)

A monthly meeting of the above Association was held at 4. P. M., on Saturday the 16th February 1935 in the Govt. Head Quarter Hospital Trichinopoly. About 35 members were present. Dr. R. Gopalan, Hon. House Surgeon of the Government Hospital, Trichinopoly was "At Home". In the absence of Dr. Norman, the Secretary proposed Dr. G. V. James, M. D., Retired Civil Surgeon of Madras, to the Chair and requested him to give his views on the new Journal of the Association. Dr. James thanked the Association for honouring him to take the chair on the occasion, and said that he read

the small Journal with pleasure and was much impressed with the neat get up and the very useful information it contained. There were some information in the Journal which were of late development in medicine and new to him. He also said that the Journal is unique in South India and wished it all success. He also congratulated the Association for its activities for the last six years which he had been watching with pleasure. He then called upon Capt. Sanghamlal F.R.C.S., I.M.S., to deliver his lecture on "Infections of the Hand".

Capt. Sangham Lal delivered an interesting lecture for one hour after which there was a discussion. He then showed a case with a huge abscess in the brain which was diagnosed during life and operated upon. Dr. R. Sambasivan who presided in the latter part of the meeting made a few concluding remarks and with a vote of thanks proposed by Dr. R. Kalamegham, M.B.B.S., to the chairman, the Lecturer, and the host, the meeting terminated.

MEDICAL ASSOCIATION, BAPATLA

The first meeting of the Registered Medical Practitioners of Bapatla Taluk met at 5 P. M. on 23-2-'35 in the premises of the U. L. C. M. Hospital, Chirala, under the presidentship of Dr. Miss Barbara E. DeRemer, M.D., The meeting commenced with prayer by Dr. Samson. The president explained that the object of such meetings was to infuse a spirit of cooperation between the several members of the medical profession in this Taluq and to discuss topics of medical interest.

The following resolutions were passed.

1. Resolved to call this association the Bapatla Taluq Registered Medical Practitioners Association, and to hold a meeting at 5-30 P.M. on the last Saturday of every month, in one of the 3 towns Chirala, Vetapalem and Bapatla, each town to get its chance by rotation.

The following office bearers were elected,

2. Dr. Miss Barbara E. DeRemer, B.Sc. M.D., to be the president of the association. Dr. D. Raghava Rao, B.A., M.B.B.S. to be the Secretary of the association. Dr. G. Samson, L.M. & S. to be the Chairman of the Committee for the framing of the constitution and bye-laws. Dr. S. Rama Rao, L.M. & S. to be the Secretary of the above committee.

3. Resolved that the subscription fee of each member to be Re. 1-8-0 per quarter.

4. Resolved that the subject for discussion for the next meeting be on some phase of Tropical Medicine.

5. Resolved to send condolence messages to the bereaved families of the following deceased doctors.—

Therapeutic Notes

Miss V. B., a girl aged 13, was suffering from secondary anaemia. She used to experience convulsions constantly which were attributed by the doctor in the village from which she hailed to worms.

She was brought to Bombay with very high temperature and severe headache. Under our treatment she was given a good bowel wash, and an icebag was constantly kept on her head to lower the temperature. An injection of quinine was administered under the impression that malaria might be the root cause of the entire complaint.

The fever did actually come down the next day but brought in its wake a series of convulsions. To quieten her down a ½ c. c. of morphine and atropine was injected but it produced no effect whatsoever, and the convulsions continued.

On closer observation it was suspected that the case might be one of chorea, twitching being characteristic only on one side of the body, viz., the face, hand and leg. A sedative mixture with increased doses were tried but once more there was a failure to do any good to the patient. While glancing over an advertisament in A. F. D.'s catalogue we happened to scan the preparation Bromo Valerinate Elixir, of which two teaspoonfuls in four of water were immediately prescribed, thrice a day. Fortunately the patient's relatives reported a marked progress in the condition of the patient on the very next day.

We attribute the improvment to the ingredients used in Bromo Valerinate Elixir which act on the cerebrum at once. Another important point to be marked in the efficacy of this medicine is that the irritable condition of the patient was markedly lessened even in one day. Formerly the girl used to yell out during convulsions but Bromo-Valerinate Elixir not only lessened the intensity of the yell but also the spasms. This case shows that Bromo-Valerinate Elixir is one of the best antispasmodics in case of mild hysteria, chorea and such other conditions where convulsions may be due to an affection of the medulla or the central nervous system. It is needless to add that the case under discussion improved completely on Bromo Valerinate Elixir alone.

From the Diary of a Medical Practitioner.

ADVT.

(1) Dr. S. Rangachari of Madras, (2) Dr. T. K. Menon of Madras, (3) Dr. B. S. Mallaya of Madras, (4) Dr. A. R. Parasurama Mudaliar of Madras.

RESOLUTIONS PASSED AT THE FOURTH CONFERENCE OF THE SUBSIDISED MEDICAL PRACTITIONERS OF GUNTUR DISTRICT

held at Guntur on 20—1—1935

1. This conference reiterates such of the resolutions passed at the 4th conference of the Provincial Rural Medical Practitioners, Madras, not given effect to by the Government and requests them to give the practitioners all facilities to continue their work in the rural areas and be induced to settle there permanently by the redress of their existing grievances, (1) to give a decent increment in subsidy to the Practitioner (2) to supply such of the dispensaries, where the practitioners treat on an average more than 30 patients a day, medicines proportionate to the extra attendance. (3) to permit a practitioner absenting himself without loss of subsidy from the village for 30 days in the year, exclusive of Sundays and recognised holidays either at one single time to a maximum of 15 days, or on a number of occasions according to his requirements.

2. This conference respectfully requests the Government to modify G. O. No. 2480 P. H., dated 25-10-34, requiring the practitioners to bind themselves in their agreement "*that they shall be availale for treatment of the poor on week days between the hours of 7 and 10 in the mornings and between the hours of 3 and 5 in the evenings and on Sundays between the hours of 7 and 10 in the mornings, and also be available for urgent cases on all days and at all hours, whether during day and night*" and requests to provide in the agreement "*that the subsidised practitioner shall ordinarily be in his place of work to attend to the necessitious poor only in the mornings, if need be, practitioners may be required to work even till 11 or 11-30 A. M.*"

3. This conference resolves to the approval of the letter of the Secretary, Provincial Rural Medical Practitioners Association, Madras, to the Government on the "subject of working hours for subsidised practitioners."

4. This conference requests the Government not to advise the district boards to transfer the control of the existing rural dispensaries, for want of funds, to the respective panchayat boards that are willing to take over the management of such dispensaries, and to direct the District Board to keep such dispensaries under its own management, receiving all such contributions offered by the respective panchayat boards.

5. This conference requests the Government that in case any Panchayat board comes forward with funds for the opening of new rural dispensaries, to advise the District Board to open such dispensary if need be in that place under its own management, receiving all the contributions offered by the respective panchayat board.

6 This conference requests the District board to sympathise with the financial status of the practitioner and give them all, an uniform aid, by giving (1) an extra remuneration of Rs. 240 a year to a practitioner (2) a ward boy a salary of Rs. 10 per month (3) an allowance of Rs. 5 per month towards house rent (4) and to provide each dispensary with a midwife, at least II class one.

7. This conference resolves that a deputation of the Rural Medical practitioners of this district, do wait on the President, District Board, Guntur, with a memorial requesting him to make the necessary favourable recommendations to the board, to give effect to our request in clause 6.

8. This conference requests the District Medical Officer to sympathise with us with regard to the availing of leave with previous permission which in practice has proved to be very inconvenient, in view of the time covered for obtaining such permission, and to kindly allow us to avail leave in anticipation of permission.

9. This conference requests the District Medical Officer to kindly consider our existing grievances and make the necessary favourable recommendations to the Government to give effect to our request in clauses Nos. 1, 2, 4, 5.

10. This conference resolves to express its heart-felt grief on the death of Dr. M. Krishnamoorty Ayyar, our past president for the III and IV conferences of the provincial Rural Medical practitioners of Madras.

NOTICE

THE ALL-INDIA OPHTHALMOLOGICAL SOCIETY

The fourth Conference of the All-India Ophthalmological Society will be held in Madras, from the 22nd to the 24th April 1935 under the Presidency of Lieut-Col. R. E. Wright, I.M.S. One session will be devoted to a discussion on Nutritional Disorders of the Eye in which Lieut-Col. Sir J. N. Duggan, Dr. S. K. Mukerjee, Lieut-Col. E. O. G. Kirwan, Dr. B. K. Narayana Rao and others will take part.

All Opthalmic Surgeons who are not already members of the Society are requested to join and help to make the Conference a great success. The Society has over 110 members on its rolls. The subscription has been reduced to Rs. 10. Application for membership may be made to Dr. G. Zachariah, "Flitcham", Marshall's Road, Egmore, Madras, or Dr. B. N. Bhaduri, 10/5-A, Wellington Street, Calcutta.

NOTES ON PREPARATIONS, APPLIANCES, ETC.

[This section is devoted to brief notices of drugs, preparations, and appliances which have been submitted to us for trial, and which after the necessary tests we can recommend as reliable.]

PEPTALAC.—Prepared by COW AND GATE LIMITED, Guildford, Surrey, England. This is a predigested milk food, in powder form, which has been reinforced by the addition of dextrinized wheat starch. It is readily made available for use by the simple addition of hot water to the powder. Some of us have employed it extensively and found that it is superior to peptonised milk made by the ordinary method, and that it is particularly valuable in the management of young children with chronic diarrhoea and also in the dieting of adults and elderly persons suffering from chronic bowel disorders, such as tubercular enteritis and entero-colitis. *Peptalac* is pleasing to the taste and is relished by both children and adults. We can recommend it for use in all conditions in which peptonised or partially digested milk is indicated.

MOLLER'S A. B. C. D. VITAMIN FOOD.—Product of PETER MOLLER A/S, Oslo, Norway. This is a palatable combination of Cod Liver Oil of extra high vitamin potency with malt extract and concentrated orange juice. It is claimed that each fluid ounce of this preparation contains 11,330 U.S.P. units Vitamin A, 5.66 rat units Vitamin B, 28.3 international units Vitamin C, and 3,396 U.S.P. units Vitamin D. Some of us have tried this preparation and found it useful in convalascent states and in cases of malnutrition in which a rapidly acting restorative tonic is indicated. Supplies can be had of the *South Indian Mercantile Company*, Park Town, Madras.

DIGOXIN.—Product of BURROUGHS, WELLCOME & CO, London. This is a pure stable crystalline glucoside isolated from the leaves of *Digitalis lanata*. It can be employed in all cases where preparations of the digitalis group are indicated; it can be administered by mouth or by intravenous injection; by the latter method, it produces almost immediate effects. It is decidedly superior to the products of *Digitalis purpurea* on the market, and we would recommend its use in all cases where digitalis therapy is indicated.

ASSOCIATION NOTES

THE SOUTH INDIAN MEDICAL UNION

At a meeting of the Council of the SOUTH INDIAN MEDICAL UNION which was held on Monday, April 7, 1935, it was resolved that:—

The Council of the South Indian Medical Union support the candidature of Dr. T. Satakopan, M.D., for election to the Indian Medical Council.

The Council is agreeable to Dr. G. Zachariah's suggestion to entertain the All-India Ophthalmological Society at tea and the secretaries be requested to raise the necessary funds in the best way possible. (The Council assumes full responsibility of meeting the bills.)

Dr. K. C. Paul be requested to carry on the duties of Publicity Officer till the next meeting of the Council.

The following new members have been admitted to the Union:—

B. M. SUNDARAVADANAM, B.A., M.B., F.R.C.S., Madras.
N. PADMANABHA PANIKKAR, L.M.S., Quilon.
S. V. APPAJI, L.M.P., Coimbatore.
P. KRISHNA DAS, L.M.P., Narasaravupet.
M. S. SUNDARESA IYER, L.M.P., Shiyali.
P. C. SIVA RAO, L.M.P., Angalur.
V. P. VISVANATHAN, L.M.P., Karur.
RAO SAHEB V. P. VENKATAKRISHNA NAIDU, L.M.P., Tanjore.

A Clinical Meeting of the Union was held on Monday, April 15, 1935, at 6.30 p.m. at 32 Broadway, when Dr. U. D. Gopal Rau read an interesting paper on " Some Recent Advances in the Treatment of the Anaemias." Dr. C. Ranganathan occupied the chair.

THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION, PALAMCOTTAH.

By invitation, the Tinnevelly District Medical Association attended a meeting of the Travancore Medical Association on the 16th March 1935 at Neyyur, 60 miles away from Palamcottah.

51 members of our Association reached there by 9 A.M. after an excursion to Cape Comorin the previous night. We were treated to excellent demonstrations in the wards and in the operation theatre by Dr. Orr, M.D., and Dr. T. H Somervell, M.B., CH.B., F.R.C.S., till 1 P.M. at the London Mission Hospital.

All the Doctors (about 100) were entertained at a sumptuous lunch. Some of us were shown round the Leper Asylum by Mr. R. A. Harlow. Tea was served to them in the Bungalows of the European Missio naries at 4 P.M.

The meeting proper then began with over 110 members (51 from the Tinnevelly District Medical Association) at 5-30 P.M. under the Presidentship of Lieut. Col. T. S. Shastry, I.M.S. Dr. Taliat, F.R.C.S., read the minutes

of the last meeting of the Travancore Medical Association which were passed. He welcomed the gathering and specially the members of the Tinnevelly District Medical Association.

Dr. I. M. Orr, M.D., read a very informing paper on "Dyspepsia in South India". Dr. T. H. Somervell, read a very stimulating paper on "Physiology in Surgical Practice". Mr. E. A. Harlow read a paper on "Drug Adulteration and Drug Legislation."

Lieut. Col. T. S. Shastry, I.M.S. brought the meeting to a close by his remarks on the subjects of the learned addresses.

On our behalf, thanks were proposed by Dr. Manuel of Tuticorin to the Travancore Medical Association, to the staff of the London Mission Hospital for the rare and variegated feast, both social and Scientific, to which we were treated the whole day. A hearty vote of thanks was proposed by Rao Bahadur Dr. V. Verghese (Retired District Medical Officer). Cheers all round brought the grand meeting to a close at 7-30 P.M.

Then the members of our Association were entertained to a grand dinner by Dr. K. Rama Ayyar, M.B.B.S., in conjunction with his father Mr. Krishna Ayyar at his residence in Nagercoil at 9 P.M. The party then returned to Palamcottah late at night.

THE MEDICAL PRACTITIONERS' ASSOCIATION, NUZVID.

The Third Anniversary of the Medical Practitioners' Association Nuzvid, was celebrated at Nuzvid on the 23rd March 1935, with the members of the Kistna District Medical Association, who held their monthly meeting in connection with the Anniversary, as guests. After light refreshments and a group photo, the meeting commenced at 4 p.m. Lt-Col. K. V. Ramana Rau, I.M.S., D.M.O., Kistna Dt., presiding. After prayer, Mr. N. Rama Rau, the Secretary of the Nuzvid Association read the annual report of the Association and Dr. Venugopal Rau Naidu, L.M.S, Assistant District Medical Officer, read the minutes of the last meeting of the District Association. The members then discussed the question of affiliating the District Medical Association to the Andhra Medical Association, and expressed their willingness for the same. Some verses in vernacular were read by Dr. N. Rama Rau; Dr. S. Hanumantah Rao, L.I.M., read an interesting paper on Vitamins. Another paper on "Foreign Bodies" was read by Dr. N. Rama Rau. The President spoke at some length on the subjects, and there was a lively discussion among the members. A resolution of condolence was passed upon the demise of Dr. G. M. Siva Subrahmanyan, L.M.S., Bezwada. Next, Lt-Col. Ramana Rao, read a paper on "Implantation of the Ureters into the Pelvic Colon" which also contained the clinical notes upon a case performed by him recently.

The President in his closing remarks thanked the secretary and the members of the Medical Practitioners' Association, Nuzvid, on the arrangements made to receive the guests of the evening, and said he was much pleased with the good work turned out by the Association though it was a small one. The meeting came to a close by 7-30 p.m. with a vote of thanks to the chair.

A Jewish lady, aged 34, and mother of three children, suffered from flatulence, colicky pain and vomiting. She was partly anaemic and had marked dyspnoea.

She was given a bowel wash on the first day but it only had a temporary effect. The peculiarity, however, was that she felt relieved only for about two hours or so, when the acute colicky pain started again.

A skiagram was taken, thinking it to be a case of appendicitis The skiagram evidenced no shadow nor any presence of renal calculics. The patient was averse to taking paraffin oil or any other local purgatives to relieve constipation.

Mycol Tablets (A. F. D.) were tried as a last resource in the circumstances and they produced an effect almost as magical as that of Alladin's lamp. Three tablets were administered 15 minutes before dinner. The patient got a clean motion, semi-solid in consistency, a period of 6 hours after the first administration.

On the second day two tablets were continued morning and evening. In 15 days time she overcame her constipation completely, the pale yellow colour disappeared from her face, vomiting stopped and she was able to tolerate and continue haematinic mixtures far better than before. The patient has even put on weight and is able to do her household work in a cheerful manner.

From the Diary of a Medical Practitioner.

ADVT.

NOTES ON PREPARATIONS, APPLIANCES, ETC.

SPRULAC.—Product of COW AND GATE LIMITED, Guildford, Surrey, England. This is a specially prepared high protein milk food in powder form, having the following composition:—

		Powder	Reconstituted Food—1 in 8
Moisture	...	3.0 per cent	88.0 per cent
Fat	...	10.6 per cent	1.3 per cent
Proteins	...	34.0 per cent	4.2 per cent
Lactose	...	45.0 per cent	5.6 per cent
Mineral Salt	...	7.4 per cent	0.9 per cent

It is prepared for consumption by the patient by the simple addition of hot water. Some of us have used it in cases of sprue and in sprue-like conditions with benefit. We recommend it to our readers who have to deal with sprue cases (see N. Hamilton Fairley, *Transactions of the Royal Society of Tropical Medicine and Hygiene*, Vol. XXV. No. 4, January, 1932, P. 297.).

THOROXYL.—Preparation of ANGLO-FRENCH DRUG CO., (Estn) Ltd., said to contain formiates and carbonates of Thorium, Dydimium, and Cerium. Clinical experience shows that it is valuable in the treatment of acute and chronic enteritis and entero-colitis. Some of us have employed it for the relief of diarrhoea in cases of tuberculous enteritis with marked benefit. It is put up in tablet form. In acute cases one tablet is to be administered every hour with a little water; and in chronic cases 6 to 10 tablets daily with meals.

ASSOCIATION NOTES

THE SOUTH INDIAN MEDICAL UNION.

On Wednesday, the 24th April 1935, the South Indian Medical Union held a Tea party to meet the members of the All-India Ophthalmological Society who had come to Madras to attend the Fourth Conference of the Society. Those present included Lt. Col. R. E. Wright, I.M.S., Lt. Col. V. Mahadevan, I.M.S., Dr. E. V. Srinivasan, Dr. T. Satakopan, Dr. B. K. Narayana Rao, Dr. G. Zachariah, Dr. Mrs. L. Jacob, and G. Narayanaswami.

* * * *

A Clinical Meeting of the Union was held on Thursday, May 9, 1935 at 6-30 p.m. with Lt. Col. V. Mahadevan, I.M.S., in the chair when Dr. P. Govinda Rao read a paper on "Ligature of the Femoral Vein in Diabetic and Senile Gangrene."

Dr. Govinda Rao's paper is reproduced elsewhere in this number of the Journal.

DISCUSSION.

Dr. M. Krishnamurthi initiated the discussion by saying that in the treatment of senile and diabetic gangrene, we must not lose sight of the fact that the gangrene is a *terminal* phase of the disease and much could be done to prevent its onset by proper pedal hygiene, care in attending to minor feet troubles like corns etc., keeping the feet warm and passive vascular exercises.

Regarding the local anaesthesia it was pointed out that the addition of adrenaline to the local anaesthetic might in an already ischaemic tissue interfere with proper healing. The anaesthesia to be used should be one causing the least amount of metabolic disturbance, such as local or spinal analgesia or nitrous oxide.

Dr. P. Varadachari said that alcohol injection into the adventitia might be a useful adjunct.

Dr. P. Govinda Rao in reply agreed that much could be done by way of prophylaxis, but that the common experience was that the hospital type of patient never sought advice until gangrene had actually supervened,

when ligature of the vein held out a good chance of limiting the gangrene. Regarding alcohol injections it was said that the method was not of much use in non-spastic arterial conditions.

The Chairman, in the concluding remarks, said that a simple procedure like femoral vein ligature might be more extensively employed since it would appear to have beneficial results on theoretical grounds as well. It was also stated that a greater appreciation on the part of both the profession and the patient of the efficacy of prophylaxis would reduce the incidence of this type of gangrene as well as lead to the saving of both life and limb.

With a vote of thanks to the Chair the meeting terminated.

THE TRICHINOPOLY MEDICAL ASSOCIATION.

A monthly meeting of the above Association was held at 4-30 P.M., on Saturday the 20th April 1935, at the Government Head-Quarters Hospital, Trichinopoly. About 35 members were present. Dr. R. Doraiswamy was " At Home". Capt. Sangham Lal, F. R. C. S., I. M. S., District Medical Officer, Trichinopoly, presided.

Dr. T. S. S. Rajan demonstrated a case of stricture of the oesophagus. The patient, an average built young man of 30, complained of difficulty in swallowing for seven years, the trouble arising without any apparent cause. He developed acute obstruction for four days. Stomach tube could be passed up to the obstruction, when an opening was felt patent enough to admit fluids. X-ray showed a bag-shaped dilatation above the stricture. One or two members suspected it might be a case of "Diverticulum" and a few others suspected "Spasmadic stricture".

Dr. Kalamegham then demonstrated a case from the Head-Quarters Hospital, operated upon for sub-phrenic abscess and which later on was found to communicate with the stomach, as evidenced by the colouring matter given by mouth coming from the operated wound.

Dr. M. R. Subramanyam of Valliyana read a short and interesting paper on "Brachial Block Anaesthesia" explaining the anatomy of the brachial region and said that this form of anaesthesia was very useful and simple with a little care. He gave details of a case he had operated on recently.

In his concluding remarks, Capt. Sangham Lal congratulated Dr. Subramanyam and admired his courage and skill in performing the operation in a rural dispensary.

In proposing a vote of thanks to the host, lecturer and the Chairman, the Secretary wished that more rural practitioners would come forward with case notes and read them before the Association. The meeting then terminated at a late hour.

THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION

The Tinnevelly District Medical Association had its monthly meeting at Tuticorin along with the Anniversary of the Tuticorin Medical Union on the 27th April 1935. Members numbering above fifty including some lady doctors gathered from all parts of the District and assembled at the C. H. School, Tuticorin, at 2 P. M. The party started to the Hare Island at 3 P. M. for an excursion. Refreshments were served there and all of them returned to the mainland at 6-30 P.M.

The meeting began at 7 P. M. under the presidentship of Lieut. Col. T.S. Shastry, I.M.S. Some of the local officials and visitors including the Commissioner and the Chairman of the Tuticorin Municipality were also present. The Annual Report of the Tuticorin Medical Union was read by the Secretary of the Union and was passed. The Secretary of the Tinnevelly District Medical Association read the minutes of the last meeting, which were passed. Then the question of fixing the day of the month for meetings hereafter was discussed in view of the Surgeon-General's suggestion to hold it on Government holidays.

The President moved that the following members be made Honorary members of the Association subject to the unanimous vote at the next meeting: 1. Lieut. Col. T.W. Harley, I.M.S. (Retired D.M.O.) 2. Dr. B. Ramabaliga, B.A., M.B. & C.M. (Retired D.M.O.) 3. Dr. D. Krishnayya, B.A., M.B. & C.M., (Retired D.M.O.)

Interesting clinical cases such as Hemiplegia, Cholera, Hydrocephalus were demonstrated followed by very interesting discussion. Dr. Acharya, M.B.B.S., showed an Asthma patient and read interesting notes on the case. Dr. Srinivasaraghava Iyengar, L.M. & S., and some other members spoke suggesting various lines of treatment during all stages. Alternating with the discussions, members were entertained to splendid music, Indian and European. Dr. Manuel and his family gave music on the Piano acompanied by violin and violincello. Dr. K. Ramachandran of the Local Fund Dispensary, Ettayapuram, and Nurse Miss. Phillipz of the Government Hospital, Tuticorin, entertained the audience with vocal music. Lieut. Col. T.S. Shastry, I.M.S. brought the meeting to a close by offering remarks on

the subjects discussed. He appreciated the elaborate arrangements made by the Tuticorin Medical Union. A vote of thanks was proposed by Dr. Manuel, the Secretary of the Tuticorin Medical Union, who thanked the Head Master of the C. H. School, for having placed the school buildings at their disposal and Mr. Fernandez for the trip to the Hare Island. After a sumptuous dinner the gathering dispersed.

CHETTINAD MEDICAL ASSOCIATION.

The regular monthly meeting of the above association was held at Dr. Shetty's Eye, Ear, Nose and Throat Clinic at Kanadukathan, on 28th April, 1925 under the presidentship of Dr. Ramanathan, A.D.M.O., Ramanad. 20 members were present. After tea, Dr. Shetty demonstrated cases of clinical interest from his ward. One was a case of suspected pituitary tumour, another hydrocephalus in a child of 9 months, the third was a neglected case of mastoiditis with sinus thrombosis.

An interesting lecture on "Facilities for post graduate work for medicos in the western clinics" was delivered by Dr. Shetty. He impressed on the audience that Vienna was the best place. After the meeting terminated those present were taken round the wards.

THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION MADRAS.

At a clinical meeting held under auspices of the above association at "Gana Mandir", Thambu Chetty Street, Madras, on Tuesday the 30th April 1935, 6 P. M., Dr. K. Rama Rao, L. M. P., delivered a lecture on "GONORRHOEA IN THE MALE". Dr. M. Ratnavelu, L. M. & S., Hony. Asst. Surgeon, Venereal Dept., General Hospital, Madras, presided on the occasion. A large number of the members of the association and other Medical practitioners were present.

The lecturer traced the history, symptoms, complications, prophylaxis and treatment of Gonorrhoea, and laid stress on the necessity of preventive measures to combat venereal infections in this country by starting Anti-Venereal campaigns on the lines similar to the Anti-Tuberculosis campaign.

After a brief discussion on the subject in which the members took an active part, the president described in detail the dangers of venereal infection to public health. He also dealt at length on the immediate necessity for starting Anti-Venereal associations and Journals in order to educate the masses. He pointed out that when compared to the active measures taken

by the ministries of health in foreign countries India was far behind. He emphasised the usefulness of such associations to combat various diseases such as blindness, sterility, rheumatism and so forth, which to a large extent are due to venereal infections. The meeting terminated with a vote of thanks proposed by Dr. D. V. Venkappa to the president, the lecturer, the members present and the owners of the hall.

THE ALL-INDIA OPTHALMOLOGICAL SOCIETY

The Fourth Conference of the All-India Ophthalmological Society was held in Madras from 22nd to 24th April 1935. A large number of Ophthalmologists from various parts of India attended.

On the opening day the conference met at 10 A. M. in the Library Hall of the Madras Medical College. Dr. E. V. Srinivasan, chairman of the Reception Committe, welcomed the delegates in a suitable speech. Sir Mahomed Usman, B.A., K.C.I.E., formerly Member of Council and Acting Governor of Madras, opened the Conference. Lt. Col. R. E. Wright, C.I.E., I.M S., who was elected President of the session then gave the Presidential address. The opening addresses are given elsewhere in this number of the Journal.

Many scientific papers were read on the three days the conference lasted. One of the most noteworthy features of this conference was the discussion on Nutritional Disorders of the Eye which took place on the opening day.

On the last day of the conference the South Indian Medical Union entertained the delegates to Tea at the Medical College Grounds.

RURAL MEDICAL PRACTITIONERS' CONFERENCE

The Fifth Provincial Conference of the Subsidised (Rural) Medical Practitioners of the Madras Presidency was held on 20-4-35 in the Municipal High School, Bezwada, under the Presidency of Dr. D. S. Ramachandra Rao, M.A., M.D., of that place. The Conference began at 2. P.M. Dr. N. Rama Rao, L.M.P., of Gollapalli, Kistna District, and the Secretary of the Kistna District Subsidised Practitoners' Association, welcomed the delegates in a neat little speech. This over, the President was formally proposed to the Chair by Dr. S. Ramasubbu, L. M. & S., the Honorary Secretary of the Provincial Association, and seconded by Dr. S. Viswanathan of Koradacheri, Tanjore District. The President took his seat and delivered a lucid and thought-provoking address. Thereafter, a number of Resolutions requesting

for the amelioration of the present condition of the subsidised practitioners were passed. After the usual vote of thanks, the conference came to a close at 6. P. M. There was a lunch party at the end.

WELCOME ADDRESS

DR. N. RAMA RAO.

Brother delegates and gentlemen,

It is indeed a great privelege for me to extend a most cordial welcome to you all to this the 5th provincial conference of the Subsidised (Rural) Medical Practitioners and to this historic city of Bezwada. Its glorious traditions in the past, its rapid growth in every direction during recent years, its association with the victorious plans of Vijia or Arjuna, the great hero of the Mahabharata, the sacred river Krishna that flows by, all these make it a very appropriate centre for holding this conference for the first time in Andhradesa. It is a matter for rejoicing that representatives, from far and near of the entire province, have found it convenient to attend the function. It is a proof of the enthusiasm that prevails in the matter of meeting on a common platform, exchanging our views, and laying bare our grievances of which we have many.

We are singularly fortunate in having been able to secure such a distinguished member of the Independent Medical Profession as Dr. D. S. Ramachandra Rao to preside over to-day's function and guide us with his counsel and wisdom in the deliberations before us. The benefit of his vast experience in the field, his great scholarship and his well known qualities of head and heart eminently fit him for the honour of presidentship of this conference.

We are also particularly happy to have in our midst to-day Dr. S. Ramasubbu, our Provincial Secretary, who is the fighting hero for our cause all these years, and the presence of these two gentlemen here to-day is really a source of inspiration which cannot easily be estimated in words. I will attempt to outline some of the most outstanding disabilities under which we the members of the organisation labour, and discuss measures to be conjointly taken for the redress of our grievances.

The problems we have to face year to year are getting more and more serious and formidable, rendering it necessary for us to meet on occasions like this and devise measures for concerted action, to vindicate our rights and to safe-guard our interests. In the first place when the rural scheme was started, Government were prompted by a desire to bring medical aid within easy reach of every village by attracting duly qualified medical men from busy and congested towns to certain village centres, seeing that medical aid is one of the barest amenities of life to which the Provincial Government and the local bodies should first direct their attention. The Government came forward with subsidies from provincial funds and also advised local bodies to spend a reasonable portion of their resources in promoting skilled medical aid in the villages. A greater measure of freedom in respect of private practice and other matters was assured to the rural medical practitioner than to the people in regular service. But of late restrictions have been imposed from time to time on the conditions of service of the subsidised practitioner so that freedom is curtailed but status and emoluments have not been proportionately raised by way of compensation. The G. O. No. 2480 P. H,

dated 25—10—34, for instance, fixes the hours of work of our dispensaries and it evidently proves detrimental to the interests of our patients residing outside our head-quarters which also entails a heavy loss to us in respect of our practice.

Likewise, in respect of supply of drugs etc. and in the rules governiug casual leave, we have been slowly and steadily denied the original facilities, while our service is subjected to an ever increasing set of rigid rules, and we are unfortunately denied the privileges which our brethren in regular service enjoy in regard to conditions of service.

Our resolutions passed from time to time at our District Gatherings urging upon the Government the need to alter their G. O. referred to above with a view to enable us to devote at least the latter half of the day to private practice have not so far met with the expected response.

Again, the practice that seems to be obtaining under certain local bodies of serving the subsidised practitioners with notices to quit is the most dangerous step calculated to blight our prospects and make us victims to the whims and caprices of the powers that be. To seek to terminate our agreements with the local bodies which have not only a legal binding but a moral one too, on considerations other than purely departmental ones, is neither justifiable nor equitable. It is our duty to agitate for adequate provision of measures to be adopted by the Government to keep us free from anxiety and dread in such matters. The insistence by the Government on renewal of our agreements every year adds to this danger of our situation and leaves our position to the tender mercies of fluctuating politics. While the Government prescribe such course, nay, even the introduction of bond system as a piece of mere formality, the local bodies are apt to misinterpret the orders of the Government, and turn them into weapons of uncalled for and unjust interference with the original spirit of the scheme.

Further, the local bodies at times strike at the very root of the scheme by proposals to shift the subsidised dispensaries from place to place, to convert them into regular allopathic dispensaries or of any other system, or even to abolish them altogether without the least hesitation or fear, as if the Government and the department of medicine need not be previously consulted and their approval obtained for any proposed change. In such matters, I am afraid, the exact position of the District Medical Officers and their responsibilities have not been clearly defined so as to enable them to intercede and check any arbitrary action on the part of local bodies.

The needless delay that some of us experience in the matter of drawing subsidies, on account of the distance of our stations from the nearest Sub-Treasury, is another handicap which we pray to the Government to remove at an early date.

It is a matter for regret, as it is a reflection also of the business habits of people, that subsidies due from certain local bodies in certain cases should be allowed to fall into arrears for months together.

To add to these disabilities the clerical duties imposed upon us have been growing heavier and heavier in an indirect proportion to the encouragement we receive in respect of security of tenure of office, and status and emoluments.

Another of our serious grievances is the unfortunate instructions which we are receiving regarding the transit and other charges for the medicines etc, supplied, leaving us only 2/3 of

the allotment for actual medicines as well as the uniform supply of medicines to all dispensaries irrespective of the attendance at our dispensaries.

Gentlemen, I do not propose to detain you long with further details covered by the resolutions before the Conference, or to stand further between you and the presidential address. I thank you all heartily for the patience with which you have so kindly listened to my few words and I request, on behalf ot you all, Dr. D. Ramachandra Rao to accept our thanks for his kind response to our invitation and deliver his presidential address. Before I resume my seat I shall be failing in my duty if I do not tender our grateful thanks to the authorities of this High School who have so kindly placed this splendid building at our disposal for to-day's function.

RESOLUTIONS PASSED AT THE FIFTH PROVINCIAL CONFERENCE OF THE SUBSIDISED (RURAL) MEDICAL PRACTITIONERS OF THE MADRAS PRESIDENCY HELD AT BEZWADA ON 20—4—1935.

I. This Conference thanks the Government for accepting the principle contained in I resolution of the First Conference (and reiterated at successive sessions) by entrusting the working of the Scheme for Subsidised Medical Relief in Rural Areas to a district body, and requests Government to kindly concede to the subsidised practitioners in a District the privilege of their being represented on the District Boards, if the suggested District Medical Council were not feasible.

II. This Conference suggests that the subsidised Practitioners' status, education and influence, would enable them to help a good deal and to be of great benefit in any programme of rural reconstruction and correct administration of the local bodies in their vicinity, and therefore requests Government to provide subsidised practitioners with every facility therefor, and remove any disability existing at present.

III. This Conference is of the unanimous opinion that Government Order No. 2480 P. H. dated 25—10—34, is (1) against the main principle of the Scheme for Subsidised Medical Relief in Rural Areas, (2) is against the rules in vogue on the subject, (3) deprives the practitioners of a good deal of scope and facility for private practice and therefore requests Government to kindly modify their Order and provide in the Agreement that (1) a subsidised Practitioner shall ordinarily attend to the necessitous poor in the mornings only, and (2) that in case a practitioner is not or has not been able to do so in the morning of a particular day, he can attend to the poor in the evening of that day.

(*b*) This Conference also requests that the inspection of a subsidised practitioners' work at his dispensary shall be made by the competent anthorities as far as possible during working hours and after previous intimation.

IV. This Conference regards the authorisation by the authorities of vaccinators and health inspectors, not holding any diploma or degree in medicine etc., to inoculate people against cholera, plague or other epidemics (small pox excluded), and the utilization of the services of compounders and inoculators to give injections to cases of leprosy or other diseases as an encroachment on the rights and privileges of registered and qualified medical men, and

so requests Government to prohibit such practice and requisition therefor the services of medical men only.

V. This Conference desires to invite the kind attention of the Government to the fact that because of the present economic condition, keen struggle for existence and the increase in the number of qualified medical men in urban areas, many quacks have not only sprung up in, but also migrated to, rural areas, hindering the effective popularisation and spread of skilled medical aid, and adversely affecting the income of subsidised practitioners, and so requests the Government to kindly remove such obstacle and enable the practitioners to practise to the advantage of all concerned by penalising quackery, and providing through legislation that no individual, whatever system of treatment he may like to practise in, will be allowed to practice the art of healing unless he has been declared competent to do so by an authorised body of experts skilled in the respective systems.

VI. This Conference respectfully represents that as an effect of G. O. No. 2403 P. H. dated 15-11-34, the extra subsidy payable to subsidised practitioners from local board funds has in many cases either been greatly curtailed or completely with-held, reitrates resolution 15 of the IV Conference and requests Government, therefore, kindly (1) to enhance the practitioners' subsidy payable from provincial funds, and (2) to reconsider G. O. No. P. H. 139 dated 21-1-35 relax para 5 of 2403 P. H. in respect of the existing incumbents and permit the District Boards to continue to give their subsidised practitioners with retrospective effect, every extra given prior to 1-11-34.

VII. (*a*) This Conference gratefully welcomes the policy of the Government to utilise the services of subsidised practitioners for Public Health work in rural areas and suggests that the experiment may be tried, as far as possible, in the end or remote villages of a district or villages not easily accessible to or frequented by the District Health Officers.

(*b*) This Conference submits that the honorarium sanctioned to a subsidised practitioner for such work is very meagre and requests the Government to kindly enhance it to Rs. 30/- a month in addition to contingent charges and necessities.

(*c*) This Conference is of the opinion that the duties mentioned in the Director of Public Health's Circular D. No. 13 P. H. dated 17-1-35 are too many and too heavy and therefore reqnests that practitioners be not required to do vaccination work and that the other duties be curtailed to the barest minimum and confined to the most important and necessary items so as not to affect the practitioners' professional work.

(*d*) This Conference regards that the presence of a vaccinator in the village of a subsidised practitioner assigned with Public Health duties will be of great advantage to the practitioner and the department. and suggests, therefore, that one vaccinator may be made to live in the village of such practitioner to work under the guidance of the subsidised practitioner instead of the health inspector.

VIII. (*a*) This Conference expresses its deep sense of gratitude to the Government and the Surgeon-General for G. O. No. 625 P. H. dated 19-3-35 thus complying with the request contained in resolution A. VI of the I Conference and requests them to fix the age limit at 40 and order that (a) the claims of subsidised practitioners will be given preference not only to new candidates with no experience but also to other candidates with experience but with no service.

connections with the District Board, (*b*) and that in the matter of such recruitment due regard shall be given to the period of a subsidised practitioners' connection with the District Boards.

IX. (*a*) This Conference brings to the notice of the Government that some subsidised practitioners have not yet been equipped with the most necessary surgical, dental, and midwifery instruments in spite of G. O. No. 761 P. H., dated 7-4-35, reiterates resolution VII of the II Conference and requests Government to direct, and the District Boards to make, such supply as one of the conditions of the Agreement, the allotment for such supply and equipment to be separate from that for drugs.

(*b*) This Conference requests also that every subsidised practitioner shall be allowed every year a sum not exceeding Rs. 40/- in addition to the cost on drugs, for the repair or renewal of old and worn out instruments or purchase of new ones.

(*c*) Also, in view of the heavy discount, excise, packing and transit charges, this Conference requests that every practitioner should be supplied with drugs to the actual value of Rs. 460/- a year and that the other such incidental charges should be borne separately by the District Boards.

(*d*) This Conference also requests that the requirements of subsidised practitioners with L. I. M. qualifications should be supplied from the most reliable and reputed individuals or stores.

X, As it is the experience of many practitioners that the drugs supplied to them at district board cost, are not even sufficient to meet the requirements of the ordinary poor that seek relief at the practitioners residence, and as those practitioners with midwives attached, find it a great handicap to be obliged to supply from such stock the midwife's requirements for her use outside the dispensary, this Conference earnestly requests Government to direct that all the requirements of the midwife shall be separately budgeted for, and supplied on separate indents, by the district board.

XI. As some District Boards have held that house rent and contingent allowance to subsidised practitioners are inadmissible under G. O. No. 2403 P. H. dated 15—10—34 and have withheld the same from 1-11-34, this Conference requests Government to kindly permit the District Boards to pay to the subsidised practitioners such charges as heretofore and with retrospective effect.

XII. This Conference reiterates its unanimous opinion that the present leave conditions are very hard and stringent, and requests Government to allow every subsidised practitioner leave on full subsidy for 25 days in a year, exclusive of public holidays, to be availed of at one single time or on a number of occasions according to requirements; that the previous permission of the President, District Board, be not insisted upon, that the proceedure laid down in G. O. No. 1701 P. H. of 1925 shall generally be observed by the practitioners in regard to such absence and that any deduction of subsidy shall be made only for days over and above 25 days in the year irrespective of the fact whether such absence was at one single time or on many occasions.

(*b*) This Conference represents that subsidised practitioners living as they do in villages, have greater need than others for keeping themselves in touch with the latest advance in medical science and treatment, and therefore requests Government to allow

subsidised practitioners of more than 5 years' standing study leave on a decent subsistance allowance and with lien on their holding.

(c) This Conference requests Government to kindly allow the payment of the provincial subsidy to subsidised practitioners, obliged to be away from their stations for long periods due to reasons of ill-health, as when confined to bed or otherwise incapacitated to attend to their work, and permit the local boards also to pay such practitioners the subsidy for the period, payable from local board funds.

XIII. This Conference desires to point out that notwithstanding G. O. No. 2753 P. H. dated 6-12-33 there is a great delay in receiving the bill after pre-audit, and difficulty in realising the subsidy and therefore requests the Government that except in cases where there is a sub-treasury at the place of the practitioners the government subsidy be drawn by the District Medical Officer from the District Treasury and remitted to the practitioner at Government's cost.

XIV. This Conference requests that in cases of any alleged breach of any of the terms of the Agreement on the part of a practitioner, the President of a District Board shall not depute any member to enquire into the matter.

XV. This Conference submits that Government Memorandum No. 15813—2—D. 2 P. H. dated 10-5-34 deprives the Secretary of the Provincial Association of the constitutional right of bringing any case of hardship to practitioners to the notice of the Government and therefore requests government to kindly rescind it.

XVI. This Conference brings to the notice of the Government that the practice obtaining in some places of renewing every year the Agreement of the same individual as being against the object and intention of the scheme and therefore requests the Government to direct that the Agreement between a subsidised practitioner and the local board shall be executed once only at the start and need not be renewed anytime thereafter for the same practitioner but will continue so long as he works in his village abiding by the terms and conditions of the Agreement.

XVII. This conference learns with surprise that the proposal of the Kistna District Board to terminate, for reasons of financial stringency, the agreement of the subsidised practitioner at Gollapalli, especially in view of the Board's resolution last year to have a regular dispensary there, and therefore requests Government to kindly enquire into the matter and render justice.

XVIII. This Conference thanks the authorities for giving effect to some of the resolutions passed at the previous conferences, reiterates the other resolutions and requests the Government and the concerned authorities to kindly comply with the requests contained therein as early as possible.

XIX. This Conference places on record its deep sense of sorrow at the demise of Drs. M. S. Krishnamoorthy Iyer, T. Krishna Menon, B. S. Mallayya, and A. Hanumantha Rao of Chimalpadu who have helped the Association and its members to a great extent.

MEDICAL EXAMINATION RESULTS

UNIVERSITY OF MADRAS

The following candidates have been successful in the examinations for the Degree of Doctor of Medicine (M. D.) held in March-April 1935.

Branch I. General Medicine : P. A. Mathew; M. Sitarama Rao; P. S. Varadaraja Iyengar.

Branch II. Midwifery : M. B. Prabhu.

Branch IV. Tropical Medicine : N. Govindan Pandalai.

None of the candidates who appeared for the examination for the Degree of Master of Surgery passed.

GOVERNMENT OF MADRAS

L. M. P. Board of Examiners.

The following candidates were successful in the Final examination for the Diploma of LICENSED MEDICAL PRACTITIONER held at Madras in April 1935.

First Class

S. Krishnadasan, K. S. Krishnaswami.

Pass

Mary Abraham, N. Annaji, T. V. Balakrishnan, K. S. Balasubramanian, P. C. Bharatan, *Ashirvadam Chinnayya*, *Beatrice G. Cornelius*, *Kurnabai David*, N. D. Devadoss, V. Dharmarajan, G. Doraikrishnan, K. Ganesan, P. J. George, T. C. George, A. Gopalan, V. Govind, U. Govinda Rao, Hulia Job, M. Idiculla, D. John Moursand, P. T. Joseph, T. S. Kalkura, T. R. Kamalakara Rao, P. M. Kandaswamy, N. K. Kasthuri Ayyangar, P. Kesava Menon, S. Krishnamoorthi, V. V. S. Krishnamoorthi, P. N. Kumaran Nair, *K. M. Lakshmi*, T. N. Lakshmipathi, K. V. Madhavan Nair, *K. Mangalam*, C. Marghabandu, *N. K. Meenakshi*, K. M. Moosa, Md. Abdul Wahab, V. Nandagopalan, S. Narasimha Ayyar, H. Narayana Gadiar, T. P. Narayanan, N. R. Narayanaswami, A. Natarajan, M. Neelakanta Pillai, K. O. Ommen, H. J. Peters, K. Rajagopala Shetty, B. Ramanna Hedge, S. V. Sankaran, K. Satyanarayana Rao, S. Sethuraman, *Rose Soundarajula*, C. K. Srinivasan, K. S. Srinivasan, N. R. Srinivasan, G. Srinivasa Rao, K. Srinivasa Rao, N. A. Subbarayan, H. Subramaniyam, C. M. Thomas, *Sumitra Thomas*, K. Udayabaskara Rao, R. Vaidyanathan, *M. Vedanayagam*, U. Veerabhadran, K. S. Veeraraghavachari, R. Veeraswami Nayudu, T. Venkatachalam, S. Venkatarama Dikshitar, V. Venkatarama Doss.

* Names in italics are those of women candidates.

NOTICE

FIFTH ANDHRA MEDICAL CONFERENCE, VIZAGAPATAM.

The Fifth Andhra Medical Conference is to be held this year at Vizagapatam on the *7th, 8th & 9th of June* and we cordially invite you to participate actively in its deliberations.

Arrangements are being made for an exhibition of Medical and Surgical Appliances and Drugs.

Members of the Profession are earnestly requested to contribute to the success of the Conference by attending as delegates and by sending papers containing original ideas bearing on Modern Medicine and Surgery and on new methods of treatment. Clinical demonstrations are also solicited. Titles of papers should reach the Secretary, Scientific Committee, by 1st June.

Copies of resolutions intended to be moved and scientific papers should reach the Secretaries before the 1st of June 1935. The delegate fee is Rs. 3/- which may be sent in advance to the Reception Committee or paid at the Conference.

M. V. Krishna Rao,
V. V. Krishna Rao,
Joint Secretaries.

ASSOCIATION NOTES

THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

(REGISTERED)

A monthly meeting of the above association was held on Saturday the 18th May '35 at 5 P. M. in the E. R. High School, Trichinopoly, when about 30 members were present. Dr. C. Somasundaram of Puvaloor was 'At Home' and Dr. R. Kalamegham, M.B.B.S., presided.

Dr. T. S. S. Rajan showed a small boy aged 10 whom he had operated upon for Hydronephrosis. The removed matter resembled a big bag with the kidney substance embedded in its wall. He demonstrated the old case of Stricture of Oesaphagus shown in the previous meeting and which showed some improvement. He also demonstrated a case of Multiple Arthritis in a girl of 10 sent over for X-ray and demonstration by Dr. V. Iravatham of Thirukkattupally.

A case of Electric Burns treated with cod-liver-oil ointment in the Government Head Quarters Hospital, Trichy, was also demonstrated.

After demonstration there was discussion in which many members took part.

Dr. K. S. Narayanan of Madura then delivered an interesting lecture on 'Peroral Endoscopy' explaining the technique, indications, and its usefulness for diagnosis and treatment. He also demonstrated a number of latest instruments and explained their use.

With a vote of thanks proposed by the Secretary to the Lecturer, Chairman of the evening, the Host, and the Manager of the premises, the meeting terminated.

THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION, PALAMCOTTAH.

The Tinnevelly District Medical Association had its monthly meeting at Tiruchendur, one of the most sacred and salubrious seaside resorts of the Presidency, on Sunday the 26th May 1935. Members numbering 38 including some lady doctors gathered from all parts of the District. Some of the local officials and visitors were also present. Refreshments were served to all

present at 5 P. M. One of the local residents gave sweet music on the harmonium.

The meeting began at 6-30 P.M. under the Presidentship of Lieut. Col T. S. Shastry, I.M.S. The Secretary read the minutes of the last meeting which were passed.

The following resolution was moved from the chair which was carried unanimously:—

The last Sunday of every month will be the meeting day of the Association hereafter in view of the Surgeon-General's suggestion to hold it on Government holidays.

The President moved that the following be made Honorary members of the Association and they were elected unanimously:—

1. Lieut. Col. T. W. Harley, I.M.S., (Retired).
2. Dr. B. Rama Baliga, B.A., M.B. & C.M., (Retired D. M. O.)
3. Dr. D. Krishnayyah, B.A., M.B. & C.M., (Now D. M. O. Chittoor).

A small booklet entitled "Notes on Cholera and its Treatment" compiled by Lieut. Col. T. S. Shastry, I.M.S., was distributed to every one of the members. Lieut. Col. T. S. Shastry, I.M.S., explained the use of the notes for every medical practitioner as a pocket guide for the treatment of Cholera.

Dr. S. Kolappa Pillai, L.M. & S., B.S.SC., District Health Officer, Tinnevelly, presented certain posters on Malaria, Tuberculosis, etc., to the Association for which the President thanked him,

Dr. N. Isaac, L.M.P., read interesting clinical notes on two cases of Cæsarean Section performed by Lieut. Col. T. S. Shastry, I.M.S. at the Government Women and Children Hospital, Vannarpet. Then Lieut. Col. T. S. Shastry, I.M.S., delivered an interesting lecture on Cæsarean Section.

Dr. K. S. Narayanan, L.C.P.S., (Bombay), L.D SC. (Cal.) Z.L.O. (Vienna), gave an interesting demonstration and lecture on Haslinger's Endoscope which was very much appreciated. The President offered cordial thanks to Dr. Srinivasa Prabhu, L.M.P., and his co-workers for their kind and generous hospitality and for organising the meeting.

Then a very enjoyable sea-bath and a grand dinner brought the modest function to a close late at night,

ANDHRA MEDICAL ASSOCIATION

Annual Session

The annual session of the Andhra Medical Association for the year 1934–35 was held at the Town Hall, Vizagapatam, along with the conference which met on the 7th, 8th and 9th June, under the presidency of Dr. A. Lakshmipathi, B.A., M.B. & C.M., of Madras.

Among the amendments made in the draft rules of the Association was one to the effect that 10 per cent of the collections of the branches by subscription for the membership of each branch shall be paid annually to the Central Council.

The Association passed a number of resolutions the following being some of them :—

(1) The Association resented the Government attitude requiring a second opinion from Government Medical Officers on certificates issued by private practitioners, as this procedure is against the dignity of the independent medical profession. (2) It resolved that doctors in Government service should not be allowed private practice unless it be of a consulting nature, and (3) protested against the non-recognition of the Andhra Medical degrees by the Indian Medical Council and appointed a committee to investigate and agitate about the non-recognition of the Andhra Medical degrees. (4) It thanked Sir S. Radhakrishnan and Major Edden for their sincere efforts to improve the Vizagapatam Medical College and Hospital. (5) It recommended the use of Khaddar and Indian made articles and medicines as far as possible by its members. It passed resolutions, (6) urging that appointments in the Vizagapatam Medical College should be given to Andhras as far as possible, (7) urging institution of M. D., and M. S. degrees in the Andhra University, (8) recommending the starting of a central pharmaceutical laboratory in Andhradesa by the Association either by private efforts or through the agency of the Government, (9) urging the need for paying a minimum of at least Rs. 600 per year to rural medical practitioners, and (10) requesting the Government to ameliorate the services of medical men in the Local Boards and Municipalities by allowing them the same scale of pay that is granted to men in Government service.

Office-bearers for the coming year were than elected with Dr. D. S. Ramachandra Rao as President, Dr. S. V. Ramarao as Vice-president and Drs. M. V. Krishna Rao and C. Suryanarayanamurti as Secretaries, the latter being also the Treasurer.

An editorial advisory board consisting of Dr. Pattabhi Seetharamayya, Dr. D. S. Ramachandra Rao and others, was constituted to bring out a journal.

Dr. Lakshmipathi, in his presidential address, remarked that he was pleased to find that the bridge between Allopathic and Ayurvedic practitioners in the Andhra country was quickly closing up, that the untouchability of the Ayurvedic physician was removed by the Government opening the School of Indian Medicine under its own guidance and that the progress of medicine in the country depended upon the young and enthusiastic graduates, who should study the subjects from all points of view. He added that, though he was a strong supporter of Ayurvedic system, he was not against the introduction of the western scientific methods.

Continuing, he said that he was struck by the remarkable spirit of co-operation and friendliness shown by the students, the graduates and the Professors of the Vizagapatam Medical College in conducting the session. He exhorted the Andhra medical practitioners to organise themselves strongly by the establishment of branches in all the District and Taluq headquarters and by helping the progress of independent medical practitioners.

EYE, EAR, NOSE, & THROAT HOSPITAL FOR CHETTINAD.

New Buildings Opened.

Before a crowded audience of Officials and non-Officials besides several influential and prominent Nagarathars of the District, Mr. M. P. Pai, M. A,, I. C. S,. Sub-Collector, Devakottai, declared open last evening the newly constructed extensions for the Eye, Ear, Nose & Throat Hospital of Dr. Shetty at Chettinad in Ramnad District.

The function was held at the decorated pandal erected in front of the Hospital premises. Despite inclement weather, there was a large gathering and prominent among those present were Messrs. the Kumara Raja of Chettinad and Mayor of Madras, Rao Bahadur K. V. AL. RM. Ramanathan Chettiar, Rao Bahadur O. A. PR. M. AR. Arunachalam Chettiar C. V. CT. V. Venkatachalam Chettiar and the Commissioner of Karaikudi and several members of the Medical profession.

Dr. Shetty, who is specially qualified in Vienna for Eye, Ear, Nose & Throat treatment, welcomed the Collector and the audience and made a short speech, tracing the successful working of the Hospital for the past

two years. He said that the institution has been fully equipped with the most up-to-date Electro Therapeutic Apparatus, such as Diathermy, Pantostat, Ultraviolet etc., besides apparatus for specialist department of Eye, Ear, Nose and Throat and for general surgery. The Hospital, he added, had provision for about 20 beds with modern conveniences. Dr. Shetty, the founder of the Hospital, was glad to announce that it had been always the principle of the institution not to refuse any case when he felt he could do some good, however poor the patient might be, and assured them all that the Hospital would cater to the needs of the poor patients free of all charges in the special department if such deserving patients would bring a note from their Doctors.

The new buildings of the Hospital had been constructed in up-to-date fashion under the skilled supervision of Mr. J. F. Pulford, Chartered Architect of South India. Messages wishing the institution every success received from the Rajah of Chettinad, Dr. U. Rama Rao, Dr. T. S. S. Rajan, M. L. A., and M. S. M. M. Meyyappa Chettiar, Municipal Chairman, Karaikudi, and several others were read.

In declaring open the new buildings, Mr. Pai congratulated Mr. Shetty on his private enterprise in successfully working the institution for the past two years. He was glad to note that 40 poor out-patients and 4 in-patients were daily being treated free and that the people were increasingly realising the usefulness and importance of this private Hospital for special treatment. The Institution, the speaker observed, stood for the very high ideal of its profession during its past, viz., giving free treatment to the poor, and any institution with such ideals was bound to succeed. He wished the institution a bright future.

With a vote of thanks by Dr. Shetty, the function terminated. This was followed by a well attended dinner arranged by Dr. Shetty at the "Chettinad Aerodrome Grounds."

MEDICAL EXAMINATION RESULTS

UNIVERSITY OF MADRAS.

The following candidates were successful in the Final examination for the Degree of M. B. B. S., held in April 1935:—

Audikesavalu, M., Bhimaneshbushan Chattopadhyay, *Muktha Bai, B.*, Bhupendranath Mukhopadhyay., Chakrapani Menon, M., *Saraswathi, M. K. Dwaraka Bai, G. S.*, Krishnamurti, V., Dalal, I. C., Venkatesvara Rao, T, *Venkatalakshamma, K., Padmavathi, K. K., Kokila Ramabrahma.. Paranjoti. Prakashi, D,,* Gopala Pillai, P. P., Balakrishnan, V. K., *Cheriyan, Mary P.*, Daniel, P. H., George, P. V., *Grant. May E.*, Jagannathan, N., Janardhanan Poti, A., *Koman, Prameela.*, Krishnamurti Rao, B., Kurien. P. V., *Lakshmikantam, M.*, Martinus, G. F., Mathai, P. M, *Mathew, Achy.*, Nagaswami, S., Narayanan, G., Rajaram, S. R., Shankara Adyanthaya, N., Sitarama Rao., Thomas, P. G., Valisvaran, S., Vasudeva Rao. G., Venkata jagannatha Rao, P., Venkatasubrahmanyan, C. S., Yegnanaryanan, M. S.